



Quick Revision

MCOQS

Volume 1st

B. Pharm 1st & 2nd Year

All Subjects MCQs
with Answers

Authors

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Quick Revision MCQs- Volume 1st

B. Pharm 1st & 2nd year all Subjects MCQs with Answers

(As Per PCI Syllabus)

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Preface

Pharmacy education plays a crucial role in shaping competent healthcare professionals who contribute significantly to patient care, drug development, and pharmaceutical research. The Bachelor of Pharmacy curriculum, particularly during the first and second years, lays the foundation for understanding the core principles of pharmaceutical sciences. Recognizing the need for structured revision material and exam-oriented preparation, the present book titled *Quick Revision MCQs – Volume 1st: B. Pharm 1st & 2nd Year All Subjects MCQs with Answers* has been developed in accordance with the syllabus prescribed by the Pharmacy Council of India (PCI).

This book is designed to provide students with a comprehensive and systematic collection of multiple-choice questions covering major subjects taught during the early years of the B. Pharm program. The intention behind compiling this book is to assist students in strengthening conceptual clarity, enhancing memory retention, and developing analytical thinking required for academic examinations as well as various competitive examinations in the pharmaceutical field.

The questions included in this book have been carefully prepared after reviewing standard textbooks, PCI syllabus guidelines, and examination patterns followed by various universities across India. Each question is framed to test both fundamental understanding and application-based knowledge. Correct answers have been provided to facilitate self-assessment and to help students identify areas requiring further improvement.

In the current competitive academic environment, students often face challenges in revising vast syllabi within limited time. This book aims to serve as a quick revision tool that simplifies learning and helps students revise important concepts efficiently. The MCQs presented here are expected to assist students in preparing for sessional examinations, university semester examinations, GPAT, NIPER entrance tests, and other pharmacy-related competitive examinations.

The authors have made sincere efforts to ensure accuracy, clarity, and relevance of the content. However, pharmacy is a continuously evolving discipline, and improvements are always possible. We warmly welcome suggestions, constructive feedback, and valuable inputs from students, teachers, and professionals to enhance the quality of future editions.

We sincerely hope that this book will serve as a helpful academic companion and contribute to strengthening the knowledge base and confidence of pharmacy students.

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We extend our heartfelt appreciation to our colleagues and fellow academicians who provided valuable suggestions, intellectual discussions, and academic insights during the preparation of this book. Their constructive inputs helped in improving the quality and organization of the content.

We express our sincere gratitude to our students, who remain our constant source of motivation. Their enthusiasm for learning, curiosity, and academic challenges inspired us to compile this quick revision MCQ guide. Their feedback and interactions during classroom teaching significantly contributed to the development of this book.

We are extremely grateful to Mantra Publication for their continuous support, encouragement, and professional assistance throughout the publication process. Their dedication, coordination, and commitment ensured the successful completion and dissemination of this academic work.

We would also like to acknowledge the authors and publishers of various standard textbooks and reference materials that indirectly contributed to the conceptual development of the questions included in this book.

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We sincerely hope that this book will serve as a valuable academic resource and will benefit pharmacy students and educators across the country.

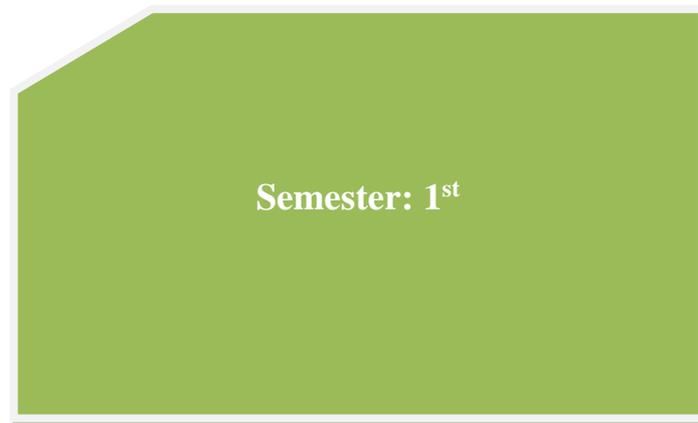
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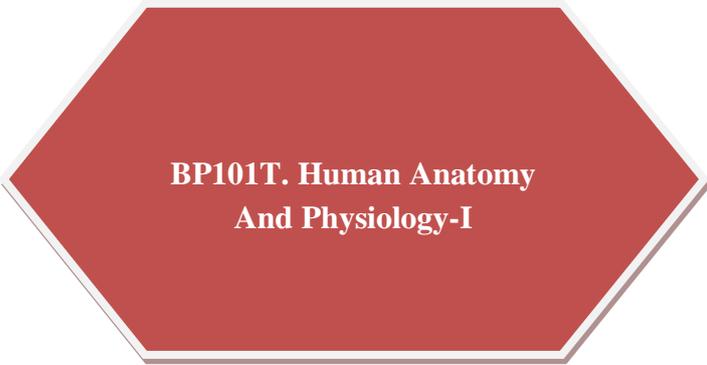
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**BP101T. Human Anatomy
And Physiology-I**

1. Anatomy is best defined as the study of:

- A. Functions of organs
- B. Chemical processes in cells
- C. Structure of the body and its parts
- D. Diseases of the body

Correct Answer: C

2. Physiology mainly deals with:

- A. Body structure
- B. Functions of body organs
- C. Classification of tissues
- D. Development of organs

Correct Answer: B

3. The smallest level of structural organization is:

- A. Cellular
- B. Chemical
- C. Tissue
- D. Organ

Correct Answer: B

4. Homeostasis refers to:

- A. External balance
- B. Growth of cells
- C. Maintenance of internal environment
- D. Cell division

Correct Answer: C

5. Which is NOT a basic life process?

- A. Metabolism
- B. Growth
- C. Responsiveness
- D. Photosynthesis

Correct Answer: D

6. Anatomical position means:

- A. Lying flat
- B. Sitting position
- C. Standing erect with palms forward
- D. Arms crossed

Correct Answer: C

7. The study of tissues is called:

- A. Cytology
- B. Histology
- C. Anatomy
- D. Physiology

Correct Answer: B

8. Cell membrane is mainly composed of:

- A. Proteins only
- B. Lipids only
- C. Phospholipids and proteins
- D. Carbohydrates

Correct Answer: C

9. Which organelle is the powerhouse of the cell?

- A. Ribosome
- B. Golgi apparatus
- C. Lysosome
- D. Mitochondria

Correct Answer: D

10. Diffusion is transport of molecules:

- A. Against concentration gradient
- B. Using ATP
- C. Through carrier proteins only
- D. From high to low concentration

Correct Answer: D

11. Active transport requires:

- A. No energy
- B. Osmosis
- C. ATP energy
- D. Diffusion

Correct Answer: C

12. Osmosis is movement of:

- A. Ions
- B. Proteins
- C. Gases
- D. Water molecules

Correct Answer: D

13. Mitosis occurs in:

- A. Germ cells
- B. Somatic cells
- C. Ova
- D. Sperm

Correct Answer: B

14. Meiosis results in:

- A. Two diploid cells
- B. Four haploid cells
- C. One cell
- D. Two haploid cells

Correct Answer: B

15. Tight junctions mainly provide:

- A. Mechanical strength
- B. Cell communication
- C. Barrier function
- D. Cell movement

Correct Answer: C

16. Desmosomes provide:

- A. Transport
- B. Secretion
- C. Strong cell adhesion
- D. Diffusion

Correct Answer: C

17. Paracrine signaling acts on:

- A. Same cell
- B. Distant organs
- C. Nearby cells
- D. Nerve cells only

Correct Answer: C

18. Endocrine signaling uses:

- A. Neurotransmitters
- B. Local mediators
- C. Hormones through blood
- D. Cell contact

Correct Answer: C

19. Synaptic signaling occurs in:

- A. Endocrine glands

- B. Blood vessels
- C. Nervous system
- D. Epithelium

Correct Answer: C

20. Contact-dependent signaling requires:

- A. Hormones
- B. Blood
- C. Direct cell contact
- D. Neurotransmitters

Correct Answer: C

21. Epithelial tissue functions include all EXCEPT:

- A. Protection
- B. Absorption
- C. Secretion
- D. Contraction

Correct Answer: D

22. Squamous epithelium is best suited for:

- A. Secretion
- B. Protection from friction
- C. Diffusion
- D. Movement

Correct Answer: C

23. Muscle tissue that is involuntary and striated:

- A. Skeletal
- B. Smooth
- C. Cardiac
- D. Visceral

Correct Answer: C

24. Nervous tissue is specialized for:

- A. Protection
- B. Secretion
- C. Impulse conduction
- D. Support

Correct Answer: C

25. Bone belongs to which tissue type?

- A. Epithelial
- B. Muscular
- C. Nervous
- D. Connective

Correct Answer: D

26. Blood is classified as:

- A. Muscle tissue
- B. Epithelial tissue
- C. Connective tissue
- D. Nervous tissue

Correct Answer: C

27. Fibroblasts are cells of:

- A. Blood
- B. Epithelium
- C. Muscle
- D. Connective tissue

Correct Answer: D

28. Smooth muscle is found in:

- A. Heart
- B. Limbs
- C. Viscera
- D. Tongue

Correct Answer: C

29. Neurons are supported by:

- A. Fibroblasts
- B. Myocytes
- C. Neuroglia
- D. Erythrocytes

Correct Answer: C

30. Cartilage is:

- A. Vascular
- B. Avascular
- C. Highly innervated
- D. Muscular

Correct Answer: B

31. The outermost layer of skin is:

- A. Dermis

B. Hypodermis

C. Epidermis

D. Subcutis

Correct Answer: C

32. Melanin is produced by:

A. Keratinocytes

B. Melanocytes

C. Langerhans cells

D. Fibroblasts

Correct Answer: B

33. Skin helps regulate temperature by:

A. Shivering

B. Sweating and vasodilation

C. Muscle contraction

D. Respiration

Correct Answer: B

34. Long bones example:

A. Skull

B. Vertebra

C. Femur

D. Carpals

Correct Answer: C

35. Flat bones include:

A. Humerus

B. Femur

C. Scapula

D. Tibia

Correct Answer: C

36. Axial skeleton includes:

A. Limbs

B. Pelvic girdle

C. Skull and vertebral column

D. Shoulder girdle

Correct Answer: C

37. Appendicular skeleton includes:

A. Skull

B. Ribs

C. Vertebrae

D. Limbs

Correct Answer: D

38. Osteoblasts are responsible for:

- A. Bone resorption
- B. Bone formation
- C. Calcium removal
- D. Bone destruction

Correct Answer: B

39. Osteoclasts function in:

- A. Bone growth
- B. Bone resorption
- C. Calcium deposition
- D. Bone repair

Correct Answer: B

40. Haversian system is seen in:

- A. Spongy bone
- B. Compact bone
- C. Cartilage
- D. Tendon

Correct Answer: B

41. Skeletal muscle is:

- A. Involuntary
- B. Non-striated
- C. Voluntary and striated
- D. Smooth

Correct Answer: C

42. Functional unit of muscle fiber:

- A. Myofibril
- B. Sarcomere
- C. Actin
- D. Myosin

Correct Answer: B

43. Actin is a:

- A. Thick filament
- B. Thin filament
- C. Elastic filament
- D. Contractile organ

Correct Answer: B

44. Myosin heads bind to:

- A. Calcium
- B. ATP
- C. Actin
- D. Troponin

Correct Answer: C

45. Neuromuscular junction transmits impulse via:

- A. Dopamine
- B. Acetylcholine
- C. Noradrenaline
- D. Serotonin

Correct Answer: B

46. Calcium is released from:

- A. Mitochondria
- B. Golgi
- C. Sarcoplasmic reticulum
- D. Nucleus

Correct Answer: C

47. Rigor mortis occurs due to:

- A. Excess ATP
- B. Lack of ATP
- C. Excess calcium
- D. Muscle relaxation

Correct Answer: B

48. Synovial joints are:

- A. Immovable
- B. Slightly movable
- C. Freely movable
- D. Fibrous

Correct Answer: C

49. Hinge joint example:

- A. Shoulder
- B. Hip
- C. Elbow
- D. Wrist

Correct Answer: C

50. Ball and socket joint example:

- A. Knee
- B. Hip
- C. Elbow
- D. Ankle

Correct Answer: B

51. Pivot joint allows:

- A. Flexion only
- B. Rotation
- C. Abduction
- D. Gliding

Correct Answer: B

52. Fibrous joints include:

- A. Knee
- B. Hip
- C. Skull sutures
- D. Shoulder

Correct Answer: C

53. Cartilaginous joint example:

- A. Skull
- B. Intervertebral disc
- C. Shoulder
- D. Elbow

Correct Answer: B

54. Abduction means:

- A. Toward midline
- B. Away from midline
- C. Rotation
- D. Extension

Correct Answer: B

55. Adduction means:

- A. Toward midline
- B. Away from midline
- C. Rotation
- D. Flexion

Correct Answer: A

56. Tendons connect:

- A. Bone to bone

- B. Muscle to bone
- C. Muscle to muscle
- D. Bone to cartilage

Correct Answer: B

57. Ligaments connect:

- A. Muscle to bone
- B. Bone to bone
- C. Muscle to muscle
- D. Bone to tendon

Correct Answer: B

58. Bursa reduces:

- A. Blood flow
- B. Muscle tone
- C. Friction
- D. Joint movement

Correct Answer: C

59. Meniscus is found in:

- A. Shoulder
- B. Hip
- C. **Knee**
- D. Elbow

Correct Answer: C

60. Arthritis is inflammation of:

- A. Muscle
- B. Bone
- C. Joint
- D. Ligament

Correct Answer: C

61. Plasma constitutes about:

- A. 25% of blood
- B. 40% of blood
- C. 55% of blood
- D. 75% of blood

Correct Answer: C

62. RBCs contain:

- A. Myoglobin
- B. Hemoglobin
- C. Albumin

D. Fibrinogen

Correct Answer: B

63. Normal hemoglobin in adult male:

A. 8–10 g/dL

B. 10–12 g/dL

C. 13–17 g/dL

D. 18–20 g/dL

Correct Answer: C

64. Anemia is due to:

A. Increased RBC

B. Decreased hemoglobin

C. Increased platelets

D. Increased WBC

Correct Answer: B

65. Hemopoiesis occurs in:

A. Liver only

B. Spleen only

C. Bone marrow

D. Kidney

Correct Answer: C

66. Iron is essential for:

A. RBC shape

B. Hemoglobin formation

C. Platelet formation

D. Plasma proteins

Correct Answer: B

67. Platelets are involved in:

A. Immunity

B. Oxygen transport

C. Blood clotting

D. Nutrition

Correct Answer: C

68. Coagulation factor I is:

A. Prothrombin

B. Thrombin

C. Fibrinogen

D. Heparin

Correct Answer: C

69. Vitamin K is required for:

A. RBC formation

B. WBC formation

C. Clotting factors synthesis

D. Plasma volume

Correct Answer: C

70. Universal donor blood group:

A. AB+

B. O+

C. O-

D. AB-

Correct Answer: C

71. Universal recipient:

A. O+

B. O-

C. AB+

D. AB-

Correct Answer: C

72. Rh incompatibility occurs when:

A. Rh+ mother, Rh+ fetus

B. Rh- mother, Rh- fetus

C. Rh- mother, Rh+ fetus

D. Rh+ mother, Rh- fetus

Correct Answer: C

73. Plasma proteins include all EXCEPT:

A. Albumin

B. Globulin

C. Fibrinogen

D. Hemoglobin

Correct Answer: D

74. ESR increases in:

A. Dehydration

B. Polycythemia

C. Inflammation

D. Leukemia

Correct Answer: C

75. Reticuloendothelial system includes:

- A. RBCs
- B. Platelets
- C. Macrophages
- D. Neurons

Correct Answer: C

76. Spleen functions include:

- A. RBC destruction
- B. Immune response
- C. Blood reservoir
- D. All of the above

Correct Answer: D

77. Lymph is derived from:

- A. Blood cells
- B. Interstitial fluid
- C. Plasma proteins
- D. RBCs

Correct Answer: B

78. Lymphatic capillaries are:

- A. Thick walled
- B. Thin walled
- C. Muscular
- D. Rigid

Correct Answer: B

79. Thoracic duct drains into:

- A. Right atrium
- B. Left subclavian vein
- C. Right ventricle
- D. Aorta

Correct Answer: B

80. Lymph nodes function in:

- A. Filtration
- B. Immune response
- C. Lymphocyte production
- D. All of the above

Correct Answer: D

81. PNS consists of:

- A. Brain only

- B. Spinal cord only
- C. Cranial and spinal nerves
- D. Autonomic system only

Correct Answer: C

82. Autonomic nervous system controls:

- A. Voluntary actions
- B. Skeletal muscle
- C. Involuntary activities
- D. Conscious movements

Correct Answer: C

83. Sympathetic system prepares body for:

- A. Rest
- B. Digestion
- C. Fight or flight
- D. Sleep

Correct Answer: C

84. Parasympathetic system promotes:

- A. Stress
- B. Rest and digestion
- C. Emergency
- D. Exercise

Correct Answer: B

85. Neurotransmitter of parasympathetic system:

- A. Dopamine
- B. Acetylcholine
- C. Noradrenaline
- D. Adrenaline

Correct Answer: B

86. Cranial nerves are:

- A. 10 pairs
- B. 12 pairs
- C. 14 pairs
- D. 31 pairs

Correct Answer: B

87. Spinal nerves are:

- A. 12 pairs

- B. 24 pairs
- C. 31 pairs
- D. 33 pairs

Correct Answer: C

88. Optic nerve is:

- A. Motor
- B. Sensory
- C. Mixed
- D. Autonomic

Correct Answer: B

89. Vagus nerve controls:

- A. Vision
- B. Hearing
- C. Visceral organs
- D. Smell

Correct Answer: C

90. Retina contains:

- A. Rods and cones
- B. Lens
- C. Cornea
- D. Iris

Correct Answer: A

91. Rods are responsible for:

- A. Color vision
- B. Dim light vision
- C. Day vision
- D. Sharp vision

Correct Answer: B

92. Cones help in:

- A. Night vision
- B. Color vision
- C. Hearing
- D. Smell

Correct Answer: B

93. Aqueous humor maintains:

- A. Retina
- B. Lens color
- C. Intraocular pressure

- D. Vision clarity

Correct Answer: C

94. Cataract affects:

- A. Retina
- B. Lens
- C. Cornea
- D. Iris

Correct Answer: B

95. Middle ear contains:

- A. Cochlea
- B. Semicircular canals
- C. Ossicles
- D. Auditory nerve

Correct Answer: C

96. Eustachian tube connects ear to:

- A. Nose
- B. Pharynx
- C. Larynx
- D. Trachea

Correct Answer: B

97. Organ of Corti is for:

- A. Balance
- B. Smell
- C. Hearing
- D. Taste

Correct Answer: C

98. Semicircular canals are for:

- A. Hearing
- B. Balance
- C. Smell
- D. Taste

Correct Answer: B

99. Olfactory receptors are located in:

- A. Tongue
- B. Nasal cavity
- C. Pharynx
- D. Larynx

Correct Answer: B

100. Taste buds are present on:

- A. Teeth
- B. Gums
- C. Tongue
- D. Palate

Correct Answer: C

101. Heart is located in:

- A. Abdominal cavity
- B. Mediastinum
- C. Pleural cavity
- D. Cranial cavity

Correct Answer: B

102. Heart has chambers:

- A. 2
- B. 3
- C. 4
- D. 5

Correct Answer: C

103. Right atrium receives blood from:

- A. Pulmonary vein
- B. Aorta
- C. Vena cava
- D. Pulmonary artery

Correct Answer: C

104. Mitral valve is between:

- A. RA and RV
- B. LA and LV
- C. LV and aorta
- D. RV and pulmonary artery

Correct Answer: B

105. Pacemaker of heart is:

- A. AV node
- B. Bundle of His
- C. Purkinje fibers
- D. SA node

Correct Answer: D

106. Normal heart rate:

- A. 40–60 bpm

B. 60–100 bpm

C. 100–120 bpm

D. 120–140 bpm

Correct Answer: B

107. Cardiac output equals:

A. $HR + SV$

B. $HR \times SV$

C. $SV \div HR$

D. $HR - SV$

Correct Answer: B

108. Systole means:

A. Relaxation

B. Contraction

C. Filling

D. Rest

Correct Answer: B

109. Diastole means:

A. Contraction

B. Relaxation

C. Ejection

D. Closure

Correct Answer: B

110. Normal blood pressure:

A. 100/60 mmHg

B. 120/80 mmHg

C. 140/90 mmHg

D. 160/100 mmHg

Correct Answer: B

111. Arteries carry blood:

A. Toward heart

B. Away from heart

C. To lungs only

D. Without oxygen

Correct Answer: B

112. Veins contain:

A. Thick walls

B. Valves

C. High pressure

D. Elastic tissue only

Correct Answer: B

113. Capillaries allow:

- A. Pumping
- B. Storage
- C. Exchange of gases
- D. Clotting

Correct Answer: C

114. Pulse is felt due to:

- A. Venous flow
- B. Capillary flow
- C. Arterial pressure wave
- D. Heart sound

Correct Answer: C

115. ECG records:

- A. Heart sounds
- B. Electrical activity of heart
- C. Blood pressure
- D. Pulse

Correct Answer: B

116. P wave indicates:

- A. Ventricular depolarization
- B. Atrial depolarization
- C. Ventricular repolarization
- D. Atrial repolarization

Correct Answer: B

117. QRS complex shows:

- A. Atrial contraction
- B. Ventricular depolarization
- C. Ventricular relaxation
- D. Atrial relaxation

Correct Answer: B

118. T wave represents:

- A. Atrial depolarization
- B. Ventricular repolarization
- C. Atrial repolarization
- D. Ventricular contraction

Correct Answer: B

119. Hypertension means:

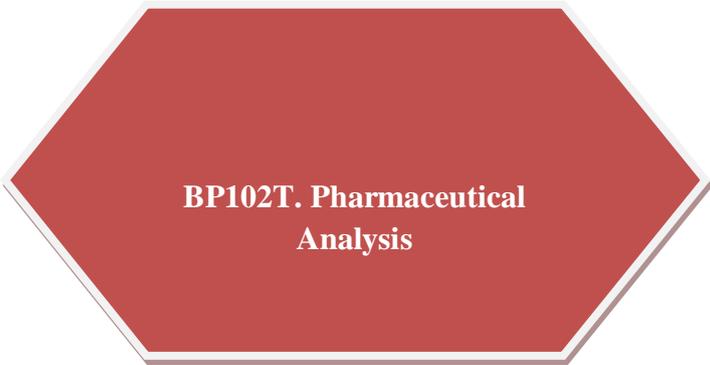
- A. Low BP
- B. Normal BP
- C. High BP
- D. Fluctuating BP

Correct Answer: C

120. Angina pectoris is due to:

- A. Valve defect
- B. Reduced blood supply to heart
- C. Arrhythmia
- D. Infection

Correct Answer: B



**BP102T. Pharmaceutical
Analysis**

1. Pharmaceutical analysis mainly deals with:

- A. Drug synthesis
- B. Drug marketing
- C. Identification, purity and quality of drugs
- D. Drug packaging

Correct Answer: C

2. Quantitative analysis is concerned with:

- A. Identity of substance
- B. Purity of substance
- C. Amount of substance present
- D. Source of drug

Correct Answer: C

3. Which is NOT an analytical technique?

- A. Titrimetric
- B. Gravimetric
- C. Spectroscopic
- D. Fermentation

Correct Answer: D

4. Molarity is defined as:

- A. Grams per litre
- B. Moles of solute per litre of solution
- C. Equivalent per litre
- D. Percentage strength

Correct Answer: B

5. Normality depends on:

- A. Molecular weight
- B. Volume
- C. Equivalent weight
- D. Density

Correct Answer: C

6. A primary standard should be:

- A. Hygroscopic
- B. Highly pure and stable
- C. Volatile

D. Insoluble

Correct Answer: B

7. Oxalic acid is used as:

- A. Secondary standard
- B. Primary standard
- C. Indicator
- D. Buffer

Correct Answer: B

8. Sodium hydroxide is considered:

- A. Primary standard
- B. Secondary standard
- C. Neutral standard
- D. Acidic standard

Correct Answer: B

9. Which solution is standardized using oxalic acid?

- A. HCl
- B. KMnO_4
- C. NaCl
- D. AgNO_3

Correct Answer: B

10. Sodium thiosulphate is mainly used in:

- A. Acid-base titration
- B. Iodometric titration
- C. Redox with KMnO_4
- D. Complexometry

Correct Answer: B

11. Hydrochloric acid is standardized using:

- A. Sodium hydroxide
- B. Sodium carbonate
- C. Oxalic acid
- D. Potassium permanganate

Correct Answer: B

12. Potassium permanganate acts as:

- A. Reducing agent
- B. Oxidizing agent

- C. Neutral agent
- D. Catalyst

Correct Answer: B

13. Ceric ammonium sulphate is used in:

- A. Iodometry
- B. Dichrometry
- C. Cerimetry**
- D. Bromatometry

Correct Answer: C

14. Errors due to faulty instruments are:

- A. Random errors
- B. Instrumental errors
- C. Gross errors
- D. Personal errors

Correct Answer: B

15. Random errors affect:

- A. Accuracy
- B. Precision**
- C. Systematic error
- D. Calibration

Correct Answer: B

16. Accuracy refers to:

- A. Reproducibility
- B. Closeness to true value
- C. Consistency
- D. Sensitivity

Correct Answer: B

17. Precision refers to:

- A. True value
- B. Reproducibility of results
- C. Sensitivity
- D. Error elimination

Correct Answer: B

18. Significant figures indicate:

- A. Exact value
- B. Degree of accuracy

- C. Precision only
- D. Approximation only

Correct Answer: B

19. Pharmacopoeia is:

- A. Drug law
- B. Official book of drug standards
- C. Medical dictionary
- D. Research journal

Correct Answer: B

20. Indian Pharmacopoeia is published by:

- A. WHO
- B. CDSCO
- C. Indian Pharmacopoeia Commission**
- D. PCI

Correct Answer: C

21. Impurities may arise due to:

- A. Manufacturing process
- B. Storage
- C. Decomposition
- D. All of the above**

Correct Answer: D

22. Limit test is designed to:

- A. Identify drug
- B. Assay drug
- C. Control impurities**
- D. Measure potency

Correct Answer: C

23. Limit test for chloride is based on:

- A. Redox reaction
- B. Precipitation reaction**
- C. Neutralization
- D. Complexation

Correct Answer: B

24. Limit test for iron uses:

- A. KMnO_4
- B. Thioglycolic acid
- C. EDTA

D. Starch

Correct Answer: B

25. Turbidity comparison is done in:

- A. Assay
- B. Limit test
- C. Gravimetry
- D. Volumetry

Correct Answer: B

26. Systematic errors are also called:

- A. Accidental errors
- B. Determinate errors
- C. Random errors
- D. Gross errors

Correct Answer: B

27. Personal errors are due to:

- A. Instruments
- B. Chemicals
- C. Observer's judgment
- D. Environment

Correct Answer: C

28. To minimize errors one should:

- A. Ignore calibration
- B. Use impure reagents
- C. Follow proper analytical procedure
- D. Increase speed

Correct Answer: C

29. Secondary standards require:

- A. No standardization
- B. Standardization before use
- C. Heating
- D. Drying only

Correct Answer: B

30. Normal solution contains:

- A. 1 mole per litre
- B. 1 gram equivalent per litre
- C. 1 gram per litre
- D. 1 ml per litre

Correct Answer: B

31. Arrhenius acid produces:

- A. OH^- ions
- B. H^+ ions
- C. Electrons
- D. Salts

Correct Answer: B

32. Bronsted–Lowry acid is:

- A. Electron acceptor
- B. Proton donor
- C. Proton acceptor
- D. Salt former

Correct Answer: B

33. Lewis acid is:

- A. Proton donor
- B. Proton acceptor
- C. Electron pair acceptor
- D. Electron donor

Correct Answer: C

34. Strong acid–strong base titration curve shows:

- A. Gradual pH change
- B. Sharp end point
- C. No equivalence point
- D. Weak end point

Correct Answer: B

35. Phenolphthalein is suitable for:

- A. Strong acid–strong base
- B. Weak acid–strong base
- C. Weak acid–strong base
- D. Weak acid–weak base

Correct Answer: C

36. Methyl orange is used in:

- A. Weak acid–weak base
- B. Strong acid–weak base
- C. Weak acid–strong base
- D. Non-aqueous titration

Correct Answer: B

37. Neutralization involves:

- A. Oxidation
- B. Reduction
- C. Formation of salt and water
- D. Complex formation

Correct Answer: C

38. Very weak acids are titrated using:

- A. Aqueous medium
- B. Non-aqueous medium
- C. Buffer
- D. Water

Correct Answer: B

39. Non-aqueous titration is useful for:

- A. Strong acids
- B. Strong bases
- C. Weakly acidic or basic drugs
- D. Salts only

Correct Answer: C

40. Common solvent in non-aqueous titration:

- A. Water
- B. Glacial acetic acid
- C. Alcohol
- D. Ether

Correct Answer: B

41. Acidimetry involves titration of:

- A. Acids
- B. Bases
- C. Salts
- D. Oxidants

Correct Answer: B

42. Alkalimetry involves titration of:

- A. Bases
- B. Acids
- C. Salts
- D. Reductants

Correct Answer: B

43. Sodium benzoate is estimated by:

- A. Aqueous acid-base titration
- B. Non-aqueous alkalimetry
- C. Iodometry
- D. Gravimetry

Correct Answer: B

44. Ephedrine HCl is estimated by:

- A. Redox titration
- B. Non-aqueous acidimetry
- C. Complexometry
- D. Precipitation

Correct Answer: B

45. Indicator used in non-aqueous titration:

- A. Methyl orange
- B. Crystal violet
- C. Starch
- D. Eriochrome black T

Correct Answer: B

61. Precipitation titrations are based on:

- A. Acid–base reaction
- B. Oxidation–reduction
- C. Formation of insoluble precipitate
- D. Complex formation

Correct Answer: C

62. Mohr's method uses indicator:

- A. Starch
- B. Diphenylamine
- C. Potassium chromate
- D. Eriochrome black T

Correct Answer: C

63. Mohr's method is suitable for estimation of:

- A. Potassium chloride
- B. Sodium chloride
- C. Calcium chloride
- D. Ammonium chloride

Correct Answer: B

64. End point in Mohr's method is indicated by formation of:

- A. White precipitate
- B. Yellow color
- C. Brick red precipitate
- D. Blue color

Correct Answer: C

65. Volhard's method is carried out in:

- A. Neutral medium
- B. Alkaline medium
- C. Acidic medium
- D. Buffer medium

Correct Answer: C

66. Indicator used in Volhard's method:

- A. Potassium chromate
- B. Starch
- C. Ferric ammonium sulphate
- D. Diphenylamine

Correct Answer: C

67. Modified Volhard's method differs by:

- A. Using different indicator
- B. Using alkaline medium
- C. Filtering precipitate before back titration
- D. No back titration

Correct Answer: C

68. Fajans method uses:

- A. Redox indicator
- B. Acid-base indicator
- C. Adsorption indicator
- D. Metal ion indicator

Correct Answer: C

69. Adsorption indicator example:

- A. Phenolphthalein
- B. Fluorescein
- C. Starch
- D. Methyl orange

Correct Answer: B

70. In Fajans method, end point is due to:

- A. Color change of solution
- B. Adsorption of indicator on precipitate
- C. pH change
- D. Redox reaction

Correct Answer: B

71. Argentometric titrations use:

- A. EDTA
- B. Silver nitrate
- C. Potassium permanganate
- D. Sodium thiosulphate

Correct Answer: B

72. Complexometric titrations are based on formation of:

- A. Precipitate
- B. Salt
- C. Stable complex
- D. Gas

Correct Answer: C

73. EDTA acts as:

- A. Monodentate ligand
- B. Bidentate ligand
- C. Tridentate ligand
- D. Hexadentate ligand

Correct Answer: D

74. Metal ion indicators are used to detect:

- A. pH change
- B. Redox change
- C. End point in complexometric titration
- D. Temperature change

Correct Answer: C

75. Eriochrome Black T is used for estimation of:

- A. Sodium
- B. Potassium
- C. Calcium and magnesium

D. Iron

Correct Answer: C

76. Complexometric titration of $MgSO_4$ is carried out in:

- A. Acidic medium
- B. Buffered alkaline medium
- C. Neutral medium
- D. Strong acidic medium

Correct Answer: B

77. Masking agents are used to:

- A. Increase reaction speed
- B. Prevent interference of unwanted ions
- C. Change color of indicator
- D. Increase solubility

Correct Answer: B

78. Demasking agent is used to:

- A. Remove indicator
- B. Release masked ion
- C. Stop reaction
- D. Change pH

Correct Answer: B

79. Calcium gluconate is estimated by:

- A. Acid–base titration
- B. Redox titration
- C. Complexometric titration
- D. Precipitation titration

Correct Answer: C

80. Gravimetric analysis is based on:

- A. Volume measurement
- B. Color change
- C. Mass of precipitate
- D. Electrical conductance

Correct Answer: C

81. First step in gravimetric analysis:

- A. Weighing
- B. Drying
- C. Precipitation

D. Ignition

Correct Answer: C

82. Ideal precipitate should be:

- A. Gelatinous
- B. Pure and easily filterable
- C. Highly soluble
- D. Volatile

Correct Answer: B

83. Co-precipitation causes:

- A. Loss of precipitate
- B. Impurity in precipitate
- C. Complete reaction
- D. Increased solubility

Correct Answer: B

84. Post-precipitation occurs when:

- A. Precipitate forms early
- B. Another precipitate forms on standing
- C. Filtration is rapid
- D. Reaction is incomplete

Correct Answer: B

85. Barium sulphate is estimated by:

- A. Volumetry
- B. Redox titration
- C. Gravimetric method
- D. Complexometry

Correct Answer: C

86. Diazotisation titration is based on reaction of:

- A. Alcohol
- B. Ketone
- C. Primary aromatic amine
- D. Aldehyde

Correct Answer: C

87. Diazotisation is carried out at:

- A. High temperature
- B. Room temperature
- C. $0-5^{\circ}C$

D. 50°C

Correct Answer: C

88. Sodium nitrite is used as:

- A. Reducing agent
- B. Diazotising agent
- C. Complexing agent
- D. Indicator

Correct Answer: B

89. End point in diazotisation titration is detected using:

- A. Phenolphthalein
- B. Starch-iodide paper
- C. Methyl orange
- D. Eriochrome black T

Correct Answer: B

90. Diazotisation titration is mainly used for estimation of:

- A. Alkaloids
- B. Antibiotics
- C. Sulphonamides
- D. Vitamins

Correct Answer: C

91. Oxidation is defined as:

- A. Gain of electrons
- B. Loss of oxygen
- C. Loss of electrons
- D. Gain of hydrogen

Correct Answer: C

92. Reduction involves:

- A. Loss of electrons
- B. Gain of oxygen
- C. Gain of electrons
- D. Loss of hydrogen

Correct Answer: C

93. Redox reaction involves:

- A. Only oxidation
- B. Only reduction
- C. Both oxidation and reduction

D. Neutralization

Correct Answer: C

94. Reducing agent is a substance which:

- A. Gets reduced
- B. Gets oxidized
- C. Accepts electrons
- D. Loses oxygen

Correct Answer: B

95. Oxidizing agent is a substance which:

- A. Gets oxidized
- B. Loses electrons
- C. Gets reduced
- D. Gains oxygen only

Correct Answer: C

96. Redox titrations are based on:

- A. Proton transfer
- B. Precipitation
- C. Electron transfer
- D. Complex formation

Correct Answer: C

97. Potassium permanganate acts as:

- A. Reducing agent
- B. Strong oxidizing agent
- C. Indicator
- D. Catalyst

Correct Answer: B

98. KMnO_4 titration is usually carried out in:

- A. Alkaline medium
- B. Neutral medium
- C. Acidic medium
- D. Buffered medium

Correct Answer: C

99. Self-indicator in redox titration:

- A. Potassium dichromate
- B. Sodium thiosulphate

- C. Potassium permanganate
- D. Iodine

Correct Answer: C

100. Cerimetry uses:

- A. Cerous salt
- B. Ceric ammonium sulphate
- C. Ferric chloride
- D. Potassium iodate

Correct Answer: B

101. Ceric ammonium sulphate is:

- A. Reducing agent
- B. Oxidizing agent
- C. Indicator
- D. Buffer

Correct Answer: B

102. Cerimetry is performed in:

- A. Alkaline medium
- B. Neutral medium
- C. Acidic medium
- D. Non-aqueous medium

Correct Answer: C

103. Iodimetry involves direct titration with:

- A. Sodium thiosulphate
- B. Iodine solution
- C. Potassium iodide
- D. Potassium iodate

Correct Answer: B

104. Iodometry involves:

- A. Direct iodine titration
- B. Indirect iodine titration
- C. Acid-base titration
- D. Complexometric titration

Correct Answer: B

105. In iodometry, liberated iodine is titrated with:

- A. Potassium permanganate
- B. Potassium dichromate

- C. Sodium thiosulphate
- D. Ceric ammonium sulphate

Correct Answer: C

106. Indicator used in iodometric titration:

- A. Methyl orange
- B. Phenolphthalein
- C. Starch
- D. Diphenylamine

Correct Answer: C

107. End point in iodine titration is:

- A. Yellow color
- B. Brown precipitate
- C. Disappearance of blue color
- D. Red color formation

Correct Answer: C

108. Bromatometry uses:

- A. Potassium bromide
- B. Potassium bromate
- C. Sodium bromide
- D. Bromine water

Correct Answer: B

109. Potassium bromate acts as:

- A. Reducing agent
- B. Oxidizing agent
- C. Indicator
- D. Catalyst

Correct Answer: B

110. Dichrometry uses:

- A. Potassium permanganate
- B. Potassium dichromate
- C. Sodium nitrite
- D. Ceric sulphate

Correct Answer: B

111. Potassium dichromate is preferred because it is:

- A. Hygroscopic
- B. Primary standard

- C. Volatile
D. Unstable

Correct Answer: B

112. Indicator used in dichrometric titration:

- A. Starch
B. Diphenylamine
C. Methyl orange
D. Eriochrome black T

Correct Answer: B

113. Titration with potassium iodate is an example of:

- A. Acid-base titration
B. Redox titration
C. Complexometry
D. Gravimetry

Correct Answer: B

114. Potassium iodate liberates iodine in presence of:

- A. Base
B. Alkali
C. Potassium iodide and acid
D. Water

Correct Answer: C

115. Advantage of redox titration:

- A. Requires indicator always
B. High accuracy
C. Slow reaction
D. Limited application

Correct Answer: B

116. Redox titrations are mainly used for estimation of:

- A. Weak acids
B. Salts
C. Oxidizing and reducing agents
D. Buffers

Correct Answer: C

117. Sodium thiosulphate is a:

- A. Oxidizing agent
B. Reducing agent
C. Indicator
D. Acid

Correct Answer: B

118. Starch indicator is added near end point because:

- A. It reacts slowly
B. It decomposes in presence of excess iodine
C. It increases oxidation
D. It acts as catalyst

Correct Answer: B

119. Iodine solution is prepared using:

- A. Water only
B. Alcohol
C. Potassium iodide
D. Sodium chloride

Correct Answer: C

120. Major application of iodometry is estimation of:

- A. Acids
B. Bases
C. Oxidizing agents
D. Salts

Correct Answer: C

121. Electrochemical methods of analysis are based on the measurement of:

- A. Heat changes
B. Light absorption
C. *Electrical properties of solutions*
D. Surface tension

Correct Answer: C

122. Conductometry is concerned with the measurement of:

- A. Potential difference
B. Current

- C. Resistance only
D. Electrical conductivity

Correct Answer: D

123. Unit of specific conductivity is:

- A. Ohm
B. Ohm^{-1}
C. Ohm cm
D. $\text{Ohm}^{-1} \text{ cm}^{-1}$

Correct Answer: D

124. Conductivity of a solution mainly depends on:

- A. Nature of solvent
B. Temperature
C. Concentration of ions
D. All of the above

Correct Answer: D

125. A conductivity cell consists of:

- A. Glass tube only
B. Platinum electrodes
C. Insulating material
D. Platinum electrodes fixed at a known distance

Correct Answer: D

126. Cell constant is defined as:

- A. Area/length
B. Resistance \times conductivity
C. Distance between electrodes/area of electrodes
D. Area \times resistance

Correct Answer: C

127. Conductometric titrations are especially useful for:

- A. Colored solutions
B. Turbid solutions
C. Very dilute solutions
D. All of the above

Correct Answer: D

128. During conductometric titration of strong acid vs strong base, conductivity:

- A. Remains constant
B. Increases continuously
C. Decreases then increases
D. Decreases only

Correct Answer: C

129. Advantage of conductometric titration is that it does not require:

- A. Accurate burette
B. Standard solution
C. Indicator
D. Temperature control

Correct Answer: C

130. Potentiometry involves the measurement of:

- A. Current at constant voltage
B. Voltage at constant current
C. Conductance
D. Potential difference between electrodes

Correct Answer: D

131. A potentiometric titration detects end point by:

- A. Color change
B. Precipitate formation
C. Sudden change in electrode potential
D. Change in temperature

Correct Answer: C

132. Standard hydrogen electrode potential is taken as:

- A. +1 V
B. -1 V
C. 0.00 V
D. +0.50 V

Correct Answer: C

133. Which electrode is most commonly used as reference electrode?

- A. Glass electrode
B. Platinum electrode

- C. Calomel electrode
- D. Metal electrode

Correct Answer: C

134. The calomel electrode consists of:

- A. Mercury and mercurous chloride
- B. Mercury and mercury oxide
- C. Silver and silver chloride
- D. Mercury, mercurous chloride and KCl

Correct Answer: D

135. Glass electrode is used for the determination of:

- A. Metal ions
- B. Redox potential
- C. Hydrogen ion concentration
- D. Conductivity

Correct Answer: C

136. Indicator electrodes respond to changes in:

- A. Current
- B. Conductance
- C. Activity of ions in solution
- D. Temperature

Correct Answer: C

137. End point in potentiometric titration can be determined by:

- A. Differential method
- B. Gran plot
- C. Plotting potential vs volume
- D. All of the above

Correct Answer: D

138. Polarography is an electroanalytical technique based on:

- A. Constant current
- B. Constant resistance
- C. Current–voltage relationship
- D. Constant potential

Correct Answer: C

139. The working electrode in classical polarography is:

- A. Platinum electrode
- B. Glass electrode
- C. Dropping mercury electrode
- D. Calomel electrode

Correct Answer: C

140. Ilkovic equation relates diffusion current with:

- A. Temperature only
- B. Concentration only
- C. Voltage applied
- D. Concentration, diffusion coefficient and drop time

Correct Answer: D

141. Dropping mercury electrode is preferred because:

- A. It is cheap
- B. It has high resistance
- C. It provides renewable and reproducible surface
- D. It is inert

Correct Answer: C

142. Polarographic wave is obtained due to:

- A. Migration current
- B. Convection current
- C. Diffusion current
- D. Residual current

Correct Answer: C

143. Half-wave potential is characteristic of:

- A. Concentration of analyte
- B. Temperature
- C. Supporting electrolyte
- D. Nature of electroactive species

Correct Answer: D

144. Rotating platinum electrode is mainly used in:

- A. Conductometry
- B. Potentiometry
- C. Modern polarography
- D. Gravimetry

Correct Answer: C

145. Supporting electrolyte in polarography is added to:

- A. Increase diffusion current
- B. Suppress migration current
- C. Increase resistance
- D. Reduce voltage

Correct Answer: B

146. Polarography is mainly applied for estimation of:

- A. Neutral molecules
- B. Insoluble substances
- C. Electroactive substances
- D. Volatile compounds

Correct Answer: C

147. Limiting current in polarography is independent of:

- A. Concentration
- B. Diffusion coefficient
- C. Drop time
- D. Applied potential beyond a limit

Correct Answer: D

148. Electrochemical methods are preferred because they are:

- A. Less sensitive
- B. Time consuming
- C. Expensive
- D. Highly sensitive and accurate

Correct Answer: D

149. Conductometric titration curve is plotted between:

- A. Potential and volume
- B. Current and time
- C. Conductance and volume of titrant

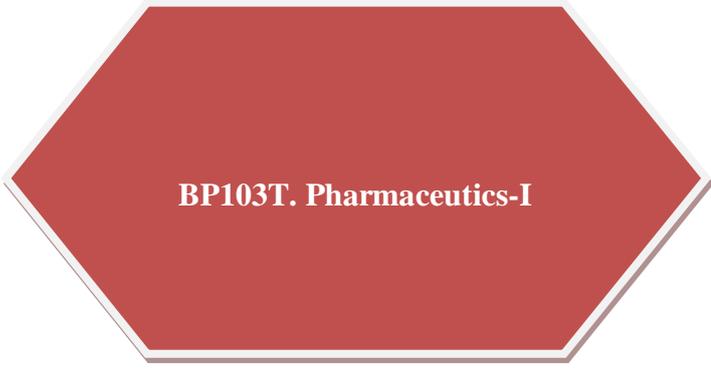
- D. Resistance and temperature

Correct Answer: C

150. Potentiometric methods are especially useful for:

- A. Colored solutions
- B. Turbid solutions
- C. Non-aqueous titrations
- D. All of the above

Correct Answer: D



BP103T. Pharmaceutics-I

1. The profession of pharmacy primarily deals with:

- A. Diagnosis of disease
- B. Manufacturing of surgical instruments
- C. Preparation and dispensing of medicines
- D. Nursing care

Correct Answer: C

2. Pharmacy education in India was formally regulated after the enactment of:

- A. Drugs Act, 1940
- B. Pharmacy Act, 1948
- C. Drugs and Cosmetics Act, 1940
- D. Medical Council Act, 1956

Correct Answer: B

3. Pharmacy Council of India (PCI) was established under:

- A. Drugs and Cosmetics Act
- B. Indian Medical Council Act
- C. Pharmacy Act, 1948
- D. Education Act

Correct Answer: C

4. The main objective of the Pharmacy Act is to regulate:

- A. Drug prices
- B. Manufacturing units
- C. Pharmacy education and profession
- D. Import of drugs

Correct Answer: C

5. Which organization regulates pharmacy education standards in India?

- A. AICTE
- B. CDSCO
- C. Pharmacy Council of India
- D. WHO

Correct Answer: C

6. Pharmacy as a career includes opportunities in:

- A. Community pharmacy
- B. Hospital pharmacy
- C. Pharmaceutical industry
- D. All of the above

Correct Answer: D

7. Indian Pharmacopoeia (IP) is published by:

- A. PCI
- B. WHO
- C. Indian Pharmacopoeia Commission
- D. CDSCO

Correct Answer: C

8. British Pharmacopoeia is officially published in:

- A. India
- B. USA
- C. United Kingdom
- D. Canada

Correct Answer: C

9. USP stands for:

- A. United States Pharmacy
- B. United States Pharmacopoeia
- C. Universal Standard Pharmacopoeia
- D. United States Pharmaceutical Council

Correct Answer: B

10. Extra Pharmacopoeia is also known as:

- A. IP
- B. BP
- C. USP
- D. Martindale

Correct Answer: D

11. Dosage form is defined as:

- A. Active ingredient only
- B. Drug with excipients
- C. Physical form of drug for administration

D. Chemical structure of drug

Correct Answer: C

12. Solid dosage forms include:

A. Syrups

B. Elixirs

C. Tablets

D. Injections

Correct Answer: C

13. Liquid dosage forms are preferred in pediatric patients because:

A. They are costly

B. Easy to swallow

C. Less stable

D. Bitter in taste

Correct Answer: B

14. Parenteral dosage forms are administered by:

A. Oral route

B. Rectal route

C. Injection

D. Inhalation

Correct Answer: C

15. Prescription is defined as:

A. Drug order by patient

B. Written order of physician for medication

C. Drug label

D. Medical report

Correct Answer: B

16. Superscription of a prescription contains:

A. Directions to pharmacist

B. Symbol R

C. Directions to patient

D. Prescriber signature

Correct Answer: B

17. Inscription includes:

A. Patient details

B. Prescriber address

C. Name and quantity of drug

D. Date

Correct Answer: C

18. Subscription in prescription gives instructions to:

A. Patient

B. Physician

C. Pharmacist

D. Nurse

Correct Answer: C

19. Transcription error occurs during:

A. Writing prescription

B. Copying prescription

C. Dispensing drug

D. Administration

Correct Answer: B

20. Omission of dose in prescription is classified as:

A. Therapeutic error

B. Prescribing error

C. Dispensing error

D. Administration error

Correct Answer: B

21. Posology deals with:

A. Drug formulation

B. Drug interaction

C. Study of drug dosage

D. Drug toxicity

Correct Answer: C

22. Which factor does NOT affect dose?

A. Age

B. Body weight

C. Disease condition

D. Color of drug

Correct Answer: D

23. Pediatric dose based on age is calculated by:

- A. Clark's formula
- B. Young's formula
- C. Fried's formula
- D. Body surface area method

Correct Answer: B

24. Clark's formula is based on:

- A. Age
- B. Body weight
- C. Body surface area
- D. Height

Correct Answer: B

25. Fried's formula is applicable for:

- A. Adults
- B. Geriatric patients
- C. Infants
- D. Obese patients

Correct Answer: C

26. Body surface area method is considered:

- A. Least accurate
- B. Complex
- C. Most accurate for pediatric dosing
- D. Obsolete

Correct Answer: C

27. Which factor increases drug dose requirement?

- A. Renal impairment
- B. Hepatic failure
- C. Tolerance
- D. Old age

Correct Answer: C

28. Idiosyncrasy refers to:

- A. Drug allergy
- B. Drug tolerance
- C. Unusual drug response
- D. Drug interaction

Correct Answer: C

29. Dose required to produce toxic effect is called:

- A. Therapeutic dose
- B. Loading dose
- C. Maintenance dose
- D. Toxic dose

Correct Answer: D

30. Posology helps in:

- A. Drug synthesis
- B. Safe and effective drug therapy
- C. Drug packaging
- D. Drug marketing

Correct Answer: B

31. The metric system unit of weight is:

- A. Pound
- B. Grain
- C. Gram
- D. Ounce

Correct Answer: C

32. In metric system, volume is expressed in:

- A. Gallon
- B. Pint
- C. Liter
- D. Fluid ounce

Correct Answer: C

33. One kilogram is equal to:

- A. 10 g
- B. 100 g
- C. 1000 g
- D. 10,000 g

Correct Answer: C

34. The imperial system of weights includes:

- A. Gram
- B. Kilogram
- C. Grain
- D. Milligram

Correct Answer: C

35. Percentage weight in volume (% w/v) indicates:

- A. g in 100 mL
- B. mL in 100 mL
- C. g in 100 g
- D. g in 100 mL of solution

Correct Answer: D

36. A 10% w/v solution contains:

- A. 10 g in 10 mL
- B. 10 g in 100 mL
- C. 100 g in 10 mL
- D. 1 g in 100 mL

Correct Answer: B

37. Alligation method is used to:

- A. Prepare isotonic solutions
- B. Mix solutions of different strengths
- C. Determine purity
- D. Prepare buffers

Correct Answer: B

38. Proof spirit contains alcohol approximately:

- A. 50% v/v
- B. 57.1% v/v
- C. 70% v/v
- D. 90% v/v

Correct Answer: B

39. Over-proof spirit contains alcohol:

- A. Less than proof spirit
- B. Equal to proof spirit
- C. More than proof spirit
- D. No alcohol

Correct Answer: C

40. Isotonic solutions have same osmotic pressure as:

- A. Distilled water
- B. Blood plasma
- C. Urine
- D. Gastric juice

Correct Answer: B

41. Freezing point of blood is approximately:

- A. 0°C
- B. -0.26°C
- C. -0.52°C
- D. -1.0°C

Correct Answer: C

42. Isotonicity by molecular weight method is based on:

- A. Conductivity
- B. pH
- C. Freezing point depression
- D. Viscosity

Correct Answer: C

43. Powders are defined as:

- A. Liquid preparations
- B. Dry, finely divided solid dosage forms
- C. Semi-solid dosage forms
- D. Gaseous preparations

Correct Answer: B

44. Powders meant for internal use include:

- A. Dusting powders
- B. Insufflations
- C. Simple and compound powders
- D. Dentifrices

Correct Answer: C

45. Advantage of powders is:

- A. Difficult to administer
- B. Rapid dissolution
- C. Low stability
- D. Unpleasant taste

Correct Answer: B

46. A disadvantage of powders is:

- A. Chemical stability
- B. Easy formulation
- C. Inaccuracy in dose for bulk powders
- D. Rapid onset of action

Correct Answer: C

47. Effervescent powders release:

- A. Oxygen
- B. Nitrogen
- C. Carbon dioxide
- D. Hydrogen

Correct Answer: C

48. Efflorescent powders:

- A. Absorb moisture
- B. Lose water of crystallization
- C. Become sticky
- D. Sublime

Correct Answer: B

49. Hygroscopic substances:

- A. Lose moisture
- B. Absorb moisture from air
- C. Sublime
- D. Are volatile

Correct Answer: B

50. Eutectic mixtures are formed due to:

- A. Chemical reaction
- B. Lowering of melting point
- C. Oxidation
- D. Reduction

Correct Answer: B

51. To prevent eutectic formation, powders are mixed with:

- A. Volatile solvents
- B. Adsorbent substances
- C. Lubricants
- D. Binders

Correct Answer: B

52. Geometric dilution is used when:

- A. Ingredients are equal
- B. Potent drug is present in small quantity
- C. Liquid is present
- D. Mixing is not required

Correct Answer: B

53. Liquid dosage forms are preferred because:

- A. They are unstable
- B. Easy to administer
- C. Require more preservatives
- D. Difficult to measure

Correct Answer: B

54. Main disadvantage of liquid dosage forms is:

- A. Rapid absorption
- B. Uniform dose
- C. Lower stability
- D. Ease of swallowing

Correct Answer: C

55. Vehicle used in liquid dosage forms includes:

- A. Lubricants
- B. Solvents
- C. Binders
- D. Disintegrants

Correct Answer: B

56. Sweetening agents are added to:

- A. Increase solubility
- B. Improve palatability
- C. Increase viscosity
- D. Preserve formulation

Correct Answer: B

57. Co-solvency is a technique used for:

- A. Emulsification
- B. Suspension
- C. Solubility enhancement
- D. Preservation

Correct Answer: C

58. Use of surfactants improves solubility by:

- A. Oxidation
- B. Micelle formation
- C. Hydrolysis

D. Reduction

Correct Answer: B

59. pH adjustment improves solubility of:

- A. Non-ionizable drugs
- B. Ionizable drugs
- C. Proteins
- D. Vitamins

Correct Answer: B

60. Preservatives in liquid dosage forms prevent:

- A. Oxidation
- B. Microbial growth
- C. Hydrolysis
- D. Photodegradation

Correct Answer: B

61. Syrups are:

- A. Alcoholic solutions
- B. Concentrated sugar solutions
- C. Emulsions
- D. Suspensions

Correct Answer: B

62. Elixirs are:

- A. Aqueous solutions
- B. Hydroalcoholic solutions
- C. Oily solutions
- D. Suspensions

Correct Answer: B

63. Liniments are intended for:

- A. Oral use
- B. External application
- C. Injection
- D. Inhalation

Correct Answer: B

64. Lotions are generally applied:

- A. Orally
- B. Without friction on skin
- C. By injection

D. Rectally

Correct Answer: B

65. Viscosity of liquid dosage form is increased by:

- A. Preservatives
- B. Sweeteners
- C. Thickening agents
- D. Antioxidants

Correct Answer: C

66. Alcohol in liquid dosage forms acts as:

- A. Vehicle only
- B. Preservative only
- C. Co-solvent only
- D. All of the above

Correct Answer: D

67. Clarifying agents are used to:

- A. Increase sweetness
- B. Improve solubility
- C. Remove suspended particles
- D. Increase viscosity

Correct Answer: C

68. Volatile solvents should be stored in:

- A. Plastic containers
- B. Well-closed containers
- C. Open containers
- D. Porous containers

Correct Answer: B

69. Flavoring agents are added to:

- A. Improve stability
- B. Improve solubility
- C. Mask unpleasant taste
- D. Prevent oxidation

Correct Answer: C

70. Liquid dosage forms require careful storage because of:

- A. Low cost
- B. High potency

- C. Microbial contamination risk
 - D. Easy administration
- Correct Answer: C*

71. Gargles are intended for:

- A. Oral ingestion
- B. Throat application
- C. Eye use
- D. Nasal use

Correct Answer: B

72. Mouthwashes are used primarily for:

- A. Internal medication
- B. Oral cavity hygiene
- C. Eye irritation
- D. Skin care

Correct Answer: B

73. Throat paints are designed to:

- A. Coat the teeth
- B. Relieve throat irritation
- C. Treat skin infection
- D. Act as anesthetic

Correct Answer: B

74. Eardrops are used for:

- A. Oral administration
- B. Ear disorders
- C. Eye infections
- D. Skin infections

Correct Answer: B

75. Nasal drops are used for:

- A. Oral hygiene
- B. Nasal cavity application
- C. Eye disorders
- D. Skin disorders

Correct Answer: B

76. Enemas are administered via:

- A. Oral route
- B. Rectal route
- C. Intravenous route

- D. Subcutaneous route
- Correct Answer: B*

77. Syrups are primarily:

- A. Alcoholic solutions
- B. Concentrated sugar solutions
- C. Oily solutions
- D. Emulsions

Correct Answer: B

78. Elixirs differ from syrups because they:

- A. Are sweetened only
- B. Contain alcohol
- C. Are viscous
- D. Are suspensions

Correct Answer: B

79. Liniments are usually applied:

- A. Orally
- B. By massage on skin
- C. Rectally
- D. Ophthalmically

Correct Answer: B

80. Lotions differ from liniments because they:

- A. Are thicker
- B. Applied without friction
- C. Are oily only
- D. Contain sugar

Correct Answer: B

81. Suspensions are defined as:

- A. Clear solutions
- B. Liquid preparations containing insoluble particles
- C. Emulsions
- D. Syrups

Correct Answer: B

82. Advantage of suspensions is:

- A. Unstable
- B. Mask unpleasant taste

- C. Less bioavailable
- D. Difficult to administer

Correct Answer: B

83. Disadvantage of suspensions is:

- A. Taste masking
- B. Settling of particles
- C. Easy swallowing
- D. Rapid absorption

Correct Answer: B

84. Flocculated suspensions:

- A. Form compact cake
- B. Particles form loose aggregates
- C. Do not settle
- D. Cannot be redispersed

Correct Answer: B

85. Deflocculated suspensions:

- A. Particles form loose aggregates
- B. Particles settle slowly and form hard cake
- C. Remain uniformly dispersed
- D. Are more stable than flocculated

Correct Answer: B

86. Suspending agents are used to:

- A. Decrease viscosity
- B. Maintain uniform dispersion
- C. Increase drug potency
- D. Enhance flavor

Correct Answer: B

87. Wetting agents are used in suspensions to:

- A. Increase pH
- B. Reduce surface tension of particles
- C. Enhance taste
- D. Increase solubility of drug

Correct Answer: B

88. The stability of suspensions can be improved by:

- A. Reducing particle size

- B. Adjusting viscosity
- C. Both A and B
- D. Addition of sugar

Correct Answer: C

89. Emulsions are:

- A. Solid in solid
- B. Liquid in liquid
- C. Solid in liquid
- D. Gas in liquid

Correct Answer: B

90. Type of emulsion where oil is dispersed in water is:

- A. W/O
- B. O/W
- C. Microemulsion
- D. Nanoemulsion

Correct Answer: B

91. Type of emulsion where water is dispersed in oil is:

- A. O/W
- B. W/O
- C. Microemulsion
- D. Nanoemulsion

Correct Answer: B

92. Emulsifying agents stabilize emulsions by:

- A. Reducing pH
- B. Reducing interfacial tension
- C. Increasing density
- D. Increasing temperature

Correct Answer: B

93. Test for identification of emulsion type is:

- A. Flocculation test
- B. Sedimentation test
- C. Dye solubility test
- D. Viscosity test

Correct Answer: C

94. Emulsions are prepared by:

- A. Simple mixing
- B. Homogenization or vigorous shaking
- C. Dissolving in water
- D. Heating only

Correct Answer: B

95. Creaming of emulsion is:

- A. Chemical degradation
- B. Accumulation of dispersed phase at top or bottom
- C. Coalescence
- D. Complete separation

Correct Answer: B

96. Breaking of emulsion leads to:

- A. Increase in viscosity
- B. Complete separation of phases
- C. Formation of foam
- D. Uniform dispersion

Correct Answer: B

97. Advantage of emulsion is:

- A. High viscosity
- B. Mask unpleasant taste of drugs
- C. Low bioavailability
- D. Poor absorption

Correct Answer: B

98. Disadvantage of emulsions:

- A. Mask taste
- B. Improve stability
- C. Physical instability
- D. Ease of administration

Correct Answer: C

99. Microemulsions differ from emulsions because they:

- A. Are opaque
- B. Thermodynamically stable and transparent
- C. Have large droplets
- D. Settle quickly

Correct Answer: B

100. Suspensions and emulsions require:

- A. Preservatives
- B. Stabilizers
- C. Sweeteners
- D. Dyes only

Correct Answer: B

101. Eardrops are considered as:

- A. Emulsion
- B. Monophasic liquid
- C. Suspension
- D. Gel

Correct Answer: B

102. Syrups and elixirs are classified as:

- A. Suspensions
- B. Gels
- C. Monophasic liquids
- D. Emulsions

Correct Answer: C

103. Suspensions require:

- A. Co-solvents
- B. Suspending agents
- C. Sweeteners
- D. Preservatives

Correct Answer: B

104. O/W emulsions contain:

- A. Oil as continuous phase
- B. Water as continuous phase
- C. Alcohol as continuous phase
- D. Solids as continuous phase

Correct Answer: B

105. Flocculation in suspensions can be prevented by:

- A. Reducing viscosity
- B. Electrolytes or protective colloids
- C. Heating
- D. Increasing particle size

Correct Answer: B

106. Deflocculated suspension can be converted to flocculated by:

- A. Reducing particle size
- B. Addition of electrolytes
- C. Heating
- D. Dilution

Correct Answer: B

107. Lotions differ from liniments due to:

- A. Viscosity
- B. Method of application
- C. Solubility
- D. Drug content

Correct Answer: B

108. Emulsions are mainly used for:

- A. Oral route only
- B. Oral, topical or parenteral use
- C. Eye drops
- D. Rectal route

Correct Answer: B

109. Hydroalcoholic solutions include:

- A. Syrups
- B. Elixirs
- C. Suspensions
- D. Lotions

Correct Answer: B

110. Flocculated suspensions are preferred because:

- A. Do not settle
- B. Easily redispersed
- C. Settle as hard cake
- D. Are unstable

Correct Answer: B

111. Suppositories are defined as:

- A. Oral solid dosage forms
- B. Solid dosage forms intended for insertion into body orifices
- C. Liquid injections

D. Topical creams

Correct Answer: B

112. The primary advantage of suppositories is:

- A. Easy to swallow
- B. Bypass first-pass metabolism
- C. Rapid dissolution
- D. Mask unpleasant taste

Correct Answer: B

113. Rectal suppositories are inserted into:

- A. Mouth
- B. Nose
- C. Rectum
- D. Ear

Correct Answer: C

114. Vaginal suppositories are also called:

- A. Pessaries
- B. Vaginal tablets or pessaries
- C. Bougies
- D. Ointments

Correct Answer: B

115. Urethral suppositories are also called:

- A. Bougies
- B. Pessaries
- C. Urethral sticks
- D. Enemas

Correct Answer: C

116. Common bases used in suppositories include:

- A. Hydroxypropyl cellulose
- B. Cocoa butter and polyethylene glycol
- C. Ethanol
- D. Glycerin only

Correct Answer: B

117. Oleaginous bases are:

- A. Water soluble
- B. Oil soluble and melt at body temperature
- C. Insoluble in oil
- D. Aqueous only

Correct Answer: B

118. Water-soluble bases include:

- A. Cocoa butter
- B. PEG bases
- C. Hydrogenated vegetable oils
- D. Fatty acids

Correct Answer: B

119. Displacement value in suppositories is:

- A. Weight of drug only
- B. Weight of base only
- C. Amount of base displaced by drug
- D. Volume of drug solution

Correct Answer: C

120. Suppositories can be evaluated by:

- A. Dissolution test
- B. Melting point
- C. Weight variation, content uniformity and melting behavior
- D. pH only

Correct Answer: C

121. Melting point of cocoa butter is approximately:

- A. 20–25°C
- B. 25–30°C
- C. 30–36°C
- D. 37–40°C

Correct Answer: C

122. Pharmaceutical incompatibility is defined as:

- A. Drug not absorbed
- B. Adverse interaction between drugs or excipients affecting stability or efficacy

- C. Drug toxicity
- D. Lack of potency

Correct Answer: B

123. Types of pharmaceutical incompatibilities include:

- A. Physical only
- B. Chemical only
- C. Therapeutic only
- D. Physical, chemical, and therapeutic

Correct Answer: D

124. Physical incompatibility occurs due to:

- A. Oxidation
- B. Changes in appearance, color, solubility, or precipitation
- C. Hydrolysis
- D. Drug interaction in vivo

Correct Answer: B

125. Chemical incompatibility occurs due to:

- A. Precipitation
- B. Drug degradation or reaction
- C. Sedimentation
- D. Flocculation

Correct Answer: B

126. Therapeutic incompatibility occurs when:

- A. Drugs react chemically
- B. Drugs precipitate
- C. Drugs produce antagonistic effects in body
- D. Drugs change color

Correct Answer: C

127. Example of physical incompatibility:

- A. Aspirin hydrolysis
- B. Tincture of iodine turning cloudy on dilution
- C. Penicillin decomposition

D. Drug antagonism

Correct Answer: B

128. Example of chemical incompatibility:

- A. Mixing oils
- B. Epinephrine oxidation
- C. Syrup precipitation
- D. Cream separation

Correct Answer: B

129. Example of therapeutic incompatibility:

- A. Aspirin degradation
- B. Precipitation
- C. Simultaneous use of antagonistic drugs
- D. Change in color

Correct Answer: C

130. Factors affecting incompatibility include:

- A. Temperature
- B. Light
- C. pH
- D. All of the above

Correct Answer: D

131. Physical incompatibilities can be minimized by:

- A. Reducing pH
- B. Using suitable solvents or emulsifying agents
- C. Avoiding preservatives
- D. Heating only

Correct Answer: B

132. Chemical incompatibilities can be minimized by:

- A. Refrigeration
- B. Adjusting pH, using antioxidants, or light protection
- C. Using excipients only
- D. Mixing slowly

Correct Answer: B

133. Therapeutic incompatibilities can be avoided by:

- A. Avoiding combination therapy
- B. Using proper timing and dosing
- C. Using solvents
- D. Refrigeration

Correct Answer: B

134. Hydrolysis is an example of:

- A. Physical incompatibility
- B. Chemical incompatibility
- C. Therapeutic incompatibility
- D. Dose error

Correct Answer: B

135. Oxidation of drugs leads to:

- A. Sedimentation
- B. Loss of potency and color change
- C. Improved solubility
- D. Masked taste

Correct Answer: B

136. Adsorption of one drug on another is:

- A. Chemical incompatibility
- B. Physical incompatibility
- C. Therapeutic incompatibility
- D. Toxicity

Correct Answer: B

137. Emulsion breaking due to incompatibility is:

- A. Chemical
- B. Physical
- C. Therapeutic
- D. Biological

Correct Answer: B

138. Drugs with acidic and alkaline nature should:

- A. Be mixed directly
- B. Be kept separate or in buffered formulation
- C. Increase potency

D. Remain in single solution

Correct Answer: B

139. Storage of photosensitive drugs requires:

- A. High temperature
- B. Protection from light
- C. Freezing
- D. Open containers

Correct Answer: B

140. Use of antioxidants prevents:

- A. Physical incompatibility
- B. pH change
- C. Oxidation of drugs
- D. Sedimentation

Correct Answer: C

141. Semisolid dosage forms are mainly intended for:

- A. Oral administration
- B. Parenteral use
- C. Topical application
- D. Rectal use

Correct Answer: C

142. Ointments are usually:

- A. Aqueous preparations
- B. Solid preparations
- C. Greasy and occlusive preparations
- D. Volatile liquids

Correct Answer: C

143. Creams differ from ointments because they are:

- A. Completely oily
- B. Solid at room temperature
- C. Less greasy and easily washable
- D. Used orally

Correct Answer: C

144. Pastes contain a higher proportion of:

- A. Liquid

B. Oil

C. Solid substances

D. Alcohol

Correct Answer: C

145. Gels are prepared using:

- A. Oils
- B. Gelling agents
- C. Preservatives only
- D. Sweeteners

Correct Answer: B

146. Dermal penetration of drugs is affected by:

- A. Drug concentration
- B. Skin condition
- C. Vehicle used
- D. All of the above

Correct Answer: D

147. Occlusive ointment bases:

- A. Decrease hydration of skin
- B. Increase hydration of stratum corneum
- C. Reduce drug absorption
- D. Are water soluble

Correct Answer: B

148. Creams are generally emulsions of type:

- A. W/O only
- B. O/W only
- C. Either O/W or W/O
- D. Microemulsion

Correct Answer: C

149. Evaluation parameter for semisolid dosage forms includes:

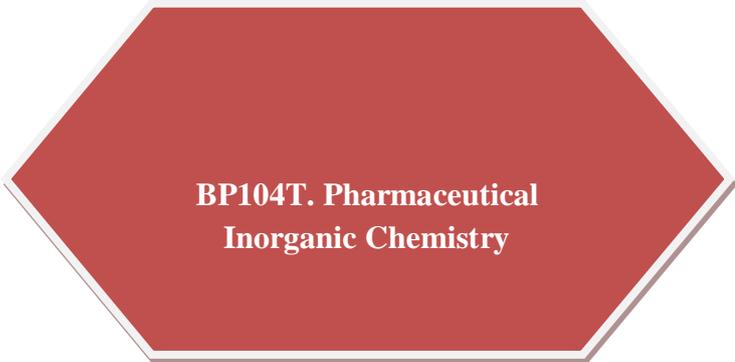
- A. Weight variation
- B. Disintegration time
- C. Consistency and spreadability
- D. Hardness

Correct Answer: C

150. Preservatives in semisolid dosage forms are required to prevent:

- A. Oxidation
- B. Microbial contamination
- C. pH change
- D. Phase separation

Correct Answer: B



**BP104T. Pharmaceutical
Inorganic Chemistry**

1. Pharmacopoeia is defined as:

- A. Book of drug marketing
- B. Official book containing standards for drugs
- C. Book of prescriptions
- D. Medical dictionary

Correct Answer: B

2. The history of pharmacopoeia started with:

- A. British Pharmacopoeia
- B. Indian Pharmacopoeia
- C. London Pharmacopoeia
- D. United States Pharmacopoeia

Correct Answer: C

3. Indian Pharmacopoeia is published by:

- A. Ministry of Health
- B. CDSCO
- C. PCI
- D. Indian Pharmacopoeia Commission

Correct Answer: D

4. Impurities in pharmaceutical substances are undesirable because they:

- A. Improve stability
- B. Increase potency
- C. Affect safety and quality
- D. Reduce cost

Correct Answer: C

5. Source of impurities in drugs includes:

- A. Raw materials
- B. Manufacturing process
- C. Storage conditions
- D. All of the above

Correct Answer: D

6. Impurities introduced during manufacturing are called:

- A. Atmospheric impurities

- B. Process impurities
- C. Storage impurities
- D. Accidental impurities

Correct Answer: B

7. Limit test is designed to:

- A. Identify drug
- B. Control impurity level
- C. Determine assay
- D. Improve appearance

Correct Answer: B

8. Limit test for chloride is based on formation of:

- A. Blue color
- B. White turbidity of silver chloride
- C. Red precipitate
- D. Yellow solution

Correct Answer: B

9. Reagent used in chloride limit test is:

- A. Barium chloride
- B. Silver nitrate
- C. Potassium chromate
- D. Lead acetate

Correct Answer: B

10. Limit test for sulphate is based on formation of:

- A. Calcium sulphate
- B. Barium sulphate turbidity
- C. Lead sulphate
- D. Sodium sulphate

Correct Answer: B

11. The reagent used in sulphate limit test is:

- A. Silver nitrate
- B. Barium chloride
- C. Potassium permanganate
- D. Nitric acid

Correct Answer: B

12. Limit test for iron is based on formation of:

- A. Red precipitate
- B. Purple colored complex
- C. Green solution
- D. Blue turbidity

Correct Answer: B

13. Thioglycolic acid is used in limit test for:

- A. Chloride
- B. Sulphate
- C. Iron
- D. Lead

Correct Answer: C

14. Limit test for arsenic is known as:

- A. Mohr's test
- B. Gutzeit test
- C. Volhard test
- D. Nessler test

Correct Answer: B

15. Limit test for lead is based on:

- A. Turbidity
- B. Color comparison
- C. Titration
- D. Gravimetry

Correct Answer: B

16. Dithizone is used in limit test for:

- A. Iron
- B. Arsenic
- C. Lead
- D. Chloride

Correct Answer: C

17. Heavy metals limit test is expressed as:

- A. Lead sulphate
- B. Lead (Pb)
- C. Mercury
- D. Arsenic

Correct Answer: B

18. Modified limit test for chloride uses:

- A. Nitric acid only
- B. Turbidity comparison method
- C. Titration method
- D. Colorimetric method

Correct Answer: B

19. Modified sulphate limit test improves:

- A. Accuracy
- B. Precision
- C. Sensitivity
- D. All of the above

Correct Answer: D

20. NaOH is:

- A. Organic compound
- B. Inorganic compound
- C. Both
- D. None of above

Correct Answer: B

21. Assay means:

- A. Identification
- B. Purification
- C. Quantitative estimation of drug
- D. Storage

Correct Answer: C

22. Inorganic compounds are mainly used for:

- A. Nutritional purpose
- B. Diagnostic purpose
- C. Therapeutic purpose
- D. All of the above

Correct Answer: D

23. Medicinal uses of inorganic compounds depend on:

- A. Color
- B. Taste
- C. Chemical properties
- D. Molecular weight

Correct Answer: C

24. Excess impurities may cause:

- A. Reduced solubility
- B. Toxicity
- C. Instability
- D. All of the above

Correct Answer: D

25. Pharmacopoeial standards ensure:

- A. Uniformity
- B. Safety
- C. Quality
- D. All of the above

Correct Answer: D

26. Comparison solution in limit test represents:

- A. Sample
- B. Blank
- C. Maximum permissible impurity
- D. Reagent

Correct Answer: C

27. Turbidity comparison in limit tests is done visually against:

- A. Water
- B. Blank
- C. Standard solution
- D. Acid

Correct Answer: C

28. Impurities due to storage are caused by:

- A. Oxidation
- B. Hydrolysis
- C. Light
- D. All of the above

Correct Answer: D

29. Inorganic pharmaceutical chemistry mainly deals with:

- A. Organic drugs
- B. Inorganic medicinal substances
- C. Biotechnology

D. Pharmacology

Correct Answer: B

30. Purpose of limit test is to ensure impurity is:

- A. Completely absent
- B. Below detection
- C. Within prescribed limit
- D. Converted to drug

Correct Answer: C

31. Buffer capacity is defined as:

- A. pH of the buffer
- B. Ability to resist temperature change
- C. Amount of acid/base needed to change pH by one unit
- D. Total volume of buffer

Correct Ans: C

32. Henderson–Hasselbalch equation is used for calculating:

- A. Molecular weight
- B. Buffer pH
- C. Tonicity
- D. Ionic strength

Correct Ans: B

33. A buffer solution resists change in pH when:

- A. Diluted with water
- B. Heated
- C. Small amount of acid or base is added
- D. Volume is increased

Correct Ans: C

34. Which buffer system is most important in blood?

- A. Phosphate buffer
- B. Acetate buffer
- C. Carbonic acid–bicarbonate buffer
- D. Citrate buffer

Correct Ans: C

35. Buffer capacity is maximum when:

- A. $\text{pH} = 1$
- B. $\text{pH} = \text{pKa}$
- C. $\text{pH} > \text{pKa}$
- D. $\text{pH} < \text{pKa}$

Correct Ans: B

36. Isotonic solutions have osmotic pressure equal to:

- A. Distilled water
- B. Plasma
- C. Hypotonic solutions
- D. Hypertonic solutions

Correct Ans: B

37. Which method is used to adjust isotonicity based on freezing point depression?

- A. Cryoscopic method
- B. Liso method
- C. Volhard method
- D. Alligation method

Correct Ans: A

38. Sodium chloride equivalent (E-value) is used in:

- A. Buffer preparation
- B. Assay calculation
- C. Adjustment of isotonicity
- D. Molecular weight determination

Correct Ans: C

39. Normal freezing point of blood plasma is approximately:

- A. -0.52°C
- B. -1.86°C
- C. 0°C
- D. -2°C

Correct Ans: A

40. Which ion is the major extracellular cation?

- A. Potassium
- B. Calcium

- C. Magnesium
- D. Sodium

Correct Ans: D

41. Major intracellular cation is:

- A. Sodium
- B. Calcium
- C. Potassium
- D. Chloride

Correct Ans: C

42. Sodium chloride is mainly used in replacement therapy to treat:

- A. Hyperkalemia
- B. Dehydration
- C. Acidosis
- D. Anemia

Correct Ans: B

43. Calcium gluconate is therapeutically used in:

- A. Iron deficiency
- B. Hypocalcemia
- C. Hyponatremia
- D. Alkalosis

Correct Ans: B

44. ORS is primarily used for the treatment of:

- A. Fever
- B. Vomiting
- C. Dehydration due to diarrhea
- D. Constipation

Correct Ans: C

45. Which electrolyte maintains acid–base balance in the body?

- A. Sodium
- B. Potassium
- C. Bicarbonate
- D. Calcium

Correct Ans: C

46. Dentifrices are pharmaceutical preparations used for:

- A. Treating ulcers
- B. Cleaning teeth
- C. Treating gingivitis
- D. Whitening skin

Correct Ans: B

47. Role of fluoride in dental care is to:

- A. Increase saliva secretion
- B. Prevent dental caries
- C. Treat toothache
- D. Remove plaque mechanically

Correct Ans: B

48. Sodium fluoride is commonly used as:

- A. Antiseptic
- B. Desensitizing agent
- C. Anti-caries agent
- D. Astringent

Correct Ans: C

49. Zinc eugenol cement is mainly used in dentistry as:

- A. Filling material
- B. Cleaning agent
- C. Mouth freshener
- D. Polishing agent

Correct Ans: A

50. Desensitizing agents are used to treat:

- A. Gum bleeding
- B. Tooth discoloration
- C. Tooth sensitivity
- D. Dental plaque

Correct Ans: C

51. Buffer solutions in pharmaceuticals are mainly used to:

- A. Improve taste
- B. Increase solubility
- C. Maintain pH stability

D. Increase viscosity

Correct Ans: C

52. Which method is used for tonicity adjustment using E-value?

- A. White-Vincent method
- B. Cryoscopic method
- C. Molecular weight method
- D. Sodium chloride equivalent method

Correct Ans: D

53. Potassium chloride deficiency causes:

- A. Muscle weakness
- B. Hypertension
- C. Hyperglycemia
- D. Fever

Correct Ans: A

54. Physiological pH of blood is approximately:

- A. 6.8
- B. 7.0
- C. 7.4
- D. 8.0

Correct Ans: C

55. Buffers used in ophthalmic preparations should be:

- A. Strongly acidic
- B. Strongly alkaline
- C. Near physiological pH
- D. Highly concentrated

Correct Ans: C

56. Dental caries is mainly caused due to:

- A. Protein deposition
- B. Acid production by bacteria
- C. Vitamin deficiency
- D. Calcium excess

Correct Ans: B

57. Calcium carbonate in dentifrices acts as:

- A. Sweetening agent
- B. Abrasive
- C. Preservative
- D. Flavoring agent

Correct Ans: B

58. Which electrolyte is essential for nerve impulse transmission?

- A. Calcium
- B. Sodium
- C. Potassium
- D. All of the above

Correct Ans: D

59. Buffer stability mainly depends on:

- A. Temperature
- B. Ionic strength
- C. pKa of buffer system
- D. Volume

Correct Ans: C

60. Buffered isotonic solutions are preferred in pharmaceuticals because they:

- A. Reduce irritation
- B. Increase absorption
- C. Improve color
- D. Enhance flavor

Correct Ans: A

61. Acidifiers are agents which:

- A. Neutralize gastric acid
- B. Increase gastric acidity
- C. Reduce intestinal motility
- D. Act as laxatives

Correct Ans: B

62. Which of the following is a systemic acidifier?

- A. Citric acid
- B. Ammonium chloride
- C. Sodium bicarbonate

D. Magnesium hydroxide

Correct Ans: B

63. Dilute hydrochloric acid is therapeutically used in:

- A. Hyperacidity
- B. Peptic ulcer
- C. Achlorhydria
- D. Constipation

Correct Ans: C

64. An ideal antacid should:

- A. Cause constipation
- B. Cause diarrhea
- C. Act slowly
- D. Neutralize acid rapidly without side effects

Correct Ans: D

65. Sodium bicarbonate acts as an antacid by:

- A. Absorbing acid
- B. Adsorbing toxins
- C. Neutralizing gastric acid
- D. Reducing gastric secretion

Correct Ans: C

66. Aluminum hydroxide gel produces which side effect?

- A. Diarrhea
- B. Constipation
- C. Vomiting
- D. Ulceration

Correct Ans: B

67. Magnesium hydroxide mixture is commonly known as:

- A. Milk of magnesia
- B. Cream of tartar
- C. Epsom salt
- D. Rochelle salt

Correct Ans: A

68. Combination of aluminum and magnesium antacids is preferred to:

- A. Increase acidity
- B. Reduce side effects
- C. Improve taste
- D. Increase absorption

Correct Ans: B

69. Magnesium sulphate is classified as a:

- A. Antacid
- B. Antimicrobial
- C. Cathartic
- D. Antiemetic

Correct Ans: C

70. Sodium orthophosphate is used therapeutically as a:

- A. Antacid
- B. Laxative
- C. Antimicrobial
- D. Astringent

Correct Ans: B

71. Kaolin is mainly used as:

- A. Antacid
- B. Adsorbent
- C. Stimulant laxative
- D. Antimicrobial

Correct Ans: B

72. Bentonite is used in pharmaceutical preparations as:

- A. Diluent
- B. Suspending agent
- C. Preservative
- D. Sweetening agent

Correct Ans: B

73. Antimicrobials act mainly by:

- A. Increasing metabolism
- B. Inhibiting microbial growth
- C. Stimulating immunity

D. Reducing fever

Correct Ans: B

74. Potassium permanganate acts as an antimicrobial due to its:

- A. Reducing property
- B. Oxidizing property
- C. Acidic nature
- D. Alkaline nature

Correct Ans: B

75. Boric acid is mainly used as:

- A. Systemic antiseptic
- B. Topical antiseptic
- C. Antacid
- D. Laxative

Correct Ans: B

76. Hydrogen peroxide produces antimicrobial action by:

- A. Protein precipitation
- B. Oxidation and release of oxygen
- C. Enzyme inhibition
- D. Acid neutralization

Correct Ans: B

77. Strength of hydrogen peroxide solution is usually expressed in:

- A. Percentage only
- B. Normality
- C. Volume strength
- D. Molarity

Correct Ans: C

78. Chlorinated lime is mainly used as:

- A. Antacid
- B. Disinfectant
- C. Astringent
- D. Expectorant

Correct Ans: B

79. Iodine acts as an antimicrobial by:

- A. Oxidizing proteins
- B. Precipitating proteins

- C. Inhibiting enzymes
- D. Adsorbing toxins

Correct Ans: A

80. Tincture of iodine is mainly used as:

- A. Oral antiseptic
- B. Surgical antiseptic
- C. Systemic disinfectant
- D. Laxative

Correct Ans: B

81. Antacids are mainly used to treat:

- A. Constipation
- B. Diarrhea
- C. Hyperacidity
- D. Vomiting

Correct Ans: C

82. Which antacid has systemic action?

- A. Aluminum hydroxide
- B. Magnesium hydroxide
- C. Sodium bicarbonate
- D. Calcium carbonate

Correct Ans: C

83. Magnesium-containing antacids may cause:

- A. Constipation
- B. Diarrhea
- C. Sedation
- D. Ulceration

Correct Ans: B

84. Adsorbent cathartics act by:

- A. Neutralizing acid
- B. Increasing water content of intestine
- C. Adsorbing toxins and bacteria
- D. Stimulating peristalsis

Correct Ans: C

85. Bentonite belongs to the class of:

- A. Laxatives
- B. Antacids
- C. Adsorbents

- D. Antiseptics

Correct Ans: C

86. Boric acid is contraindicated in:

- A. Adults
- B. Infants
- C. Elderly
- D. Pregnant women

Correct Ans: B

87. Potassium permanganate should be used in:

- A. Concentrated form
- B. Dilute solution
- C. Solid form
- D. Intravenous route

Correct Ans: B

88. Iodine preparations should be stored in:

- A. Plastic container
- B. Transparent bottle
- C. Amber colored bottle
- D. Open container

Correct Ans: C

89. Antimicrobial agents are mainly used to:

- A. Kill viruses only
- B. Kill or inhibit microorganisms
- C. Increase immunity
- D. Neutralize toxins

Correct Ans: B

90. Which of the following is both antiseptic and disinfectant?

- A. Sodium bicarbonate
- B. Boric acid
- C. Iodine
- D. Magnesium sulphate

Correct Ans: C

91. Expectorants are agents which:

- A. Suppress cough

- B. Reduce bronchial secretion
- C. Increase bronchial secretion
- D. Dilate bronchi

Correct Ans: C

92. Potassium iodide acts as an expectorant by:

- A. Decreasing mucus
- B. Liquefying bronchial secretions
- C. Suppressing cough reflex
- D. Killing microorganisms

Correct Ans: B

93. Ammonium chloride produces expectorant action by:

- A. Reflex stimulation of gastric mucosa
- B. Direct action on lungs
- C. Central nervous system depression
- D. Neutralizing acids

Correct Ans: A

94. Emetics are substances used to:

- A. Stop vomiting
- B. Induce vomiting
- C. Relieve constipation
- D. Treat cough

Correct Ans: B

95. Copper sulphate acts as an emetic by:

- A. Central action
- B. Gastric irritation
- C. Enzyme inhibition
- D. Oxidation

Correct Ans: B

96. Sodium potassium tartrate is also known as:

- A. Cream of tartar
- B. Epsom salt
- C. Rochelle salt
- D. Glauber's salt

Correct Ans: C

97. Haematinics are used in the treatment of:

- A. Hypertension
- B. Anemia
- C. Infection
- D. Diabetes

Correct Ans: B

98. Ferrous sulphate is mainly used for:

- A. Calcium deficiency
- B. Iron deficiency anemia
- C. Vitamin deficiency
- D. Blood coagulation

Correct Ans: B

99. Ferrous gluconate differs from ferrous sulphate because it:

- A. Is less soluble
- B. Is more irritating
- C. Has better gastrointestinal tolerance
- D. Acts faster

Correct Ans: C

100. Activated charcoal acts as an antidote by:

- A. Neutralization
- B. Chemical reaction
- C. Adsorption of poison
- D. Oxidation

Correct Ans: C

101. Sodium thiosulphate is used as an antidote in:

- A. Cyanide poisoning
- B. Lead poisoning
- C. Mercury poisoning
- D. Arsenic poisoning

Correct Ans: A

102. Sodium nitrite is used as an antidote mainly in:

- A. Cyanide poisoning
- B. Organophosphate poisoning
- C. Carbon monoxide poisoning

D. Opioid poisoning

Correct Ans: A

103. Astringents act by:

- A. Relaxing tissues
- B. Precipitating proteins
- C. Increasing secretion
- D. Killing bacteria only

Correct Ans: B

104. Zinc sulphate is classified as a:

- A. Antacid
- B. Astringent
- C. Expectorant
- D. Antimicrobial

Correct Ans: B

105. Potash alum is chemically known as:

- A. Potassium sulphate
- B. Potassium aluminium sulphate
- C. Sodium aluminium sulphate
- D. Aluminium chloride

Correct Ans: B

106. Excess use of expectorants may cause:

- A. Constipation
- B. Vomiting
- C. Hypertension
- D. Sedation

Correct Ans: B

107. Copper sulphate should not be used as emetic because it may cause:

- A. Constipation
- B. Diarrhea
- C. Toxicity
- D. Hypotension

Correct Ans: C

108. Iron preparations are better absorbed when administered:

- A. With antacids

B. On empty stomach

C. With milk

D. With alkaline drugs

Correct Ans: B

109. Activated charcoal is ineffective against:

- A. Alkaloids
- B. Organic poisons
- C. Metals
- D. Drugs

Correct Ans: C

110. Antidotes act mainly by:

- A. Killing poison
- B. Neutralizing or removing poison
- C. Increasing metabolism
- D. Enhancing immunity

Correct Ans: B

111. Zinc sulphate produces astringent action due to:

- A. Oxidation
- B. Protein coagulation
- C. Reduction
- D. Enzyme activation

Correct Ans: B

112. Haematinics should be administered with:

- A. Antacids
- B. Vitamin C
- C. Calcium salts
- D. Milk

Correct Ans: B

113. Sodium nitrite produces antidotal action by forming:

- A. Methemoglobin
- B. Oxyhemoglobin
- C. Carbaminohemoglobin
- D. Sulfhemoglobin

Correct Ans: A

114. Rochelle salt is mainly used as:

- A. Expectorant
- B. Antacid
- C. Emetic
- D. Laxative

Correct Ans: D

115. Potassium iodide should be stored in:

- A. Open container
- B. Transparent bottle
- C. Tightly closed container
- D. Paper wrapper

Correct Ans: C

116. Ferrous sulphate is incompatible with:

- A. Vitamin C
- B. Antacids
- C. Water
- D. Glucose

Correct Ans: B

117. Astringents are mainly used to:

- A. Increase secretion
- B. Reduce inflammation and secretion
- C. Relieve pain
- D. Kill parasites

Correct Ans: B

118. Activated charcoal should be administered:

- A. Before poison ingestion
- B. Immediately after poisoning
- C. After complete absorption
- D. After antidote

Correct Ans: B

119. Excess iron intake may cause:

- A. Anemia
- B. Gastric irritation
- C. Constipation only
- D. Hypoglycemia

Correct Ans: B

120. Potash alum is commonly used in pharmacy as:

- A. Antacid
- B. Astringent
- C. Laxative
- D. Antidote

Correct Ans: B

121. Radioactivity is defined as:

- A. Emission of light from substances
- B. Spontaneous disintegration of unstable nuclei with emission of radiation
- C. Absorption of energy by atoms
- D. Artificial nuclear reaction

Correct Ans: B

122. Unit commonly used to measure radioactivity is:

- A. Gray
- B. Sievert
- C. Curie
- D. Joule

Correct Ans: C

123. SI unit of radioactivity is:

- A. Curie
- B. Becquerel
- C. Roentgen
- D. Rad

Correct Ans: B

124. Half-life of a radioactive substance is the time required for:

- A. Complete decay
- B. Emission of alpha particles
- C. 50% of radioactive atoms to decay
- D. Activity to double

Correct Ans: C

125. α -particles are:

- A. High-energy electrons
- B. High-energy photons
- C. Helium nuclei with +2 charge

D. Neutrons

Correct Ans: C

126. Which radiation has maximum penetrating power?

- A. Alpha
- B. Beta
- C. Gamma
- D. X-ray

Correct Ans: C

127. Beta particles are:

- A. Protons
- B. High-speed electrons
- C. Neutrons
- D. Photons

Correct Ans: B

128. Gamma rays are:

- A. Charged particles
- B. Electrons
- C. Electromagnetic radiations
- D. Helium ions

Correct Ans: C

129. Which radiation has the least penetrating power?

- A. Gamma
- B. Beta
- C. X-ray
- D. Alpha

Correct Ans: D

130. Half-life of Sodium iodide I^{131} is approximately:

- A. 2 days
- B. 8 days
- C. 30 days
- D. 60 days

Correct Ans: B

131. Sodium iodide I^{131} is mainly used in the diagnosis and treatment of:

- A. Kidney disorders

B. Liver disorders

C. Thyroid disorders

D. Brain tumors

Correct Ans: C

132. Measurement of radioactivity in a sample is done using:

- A. Spectrophotometer
- B. Flame photometer
- C. Geiger–Müller counter
- D. pH meter

Correct Ans: C

133. Radioisotopes used for diagnostic purposes should have:

- A. Long half-life
- B. High toxicity
- C. Short half-life
- D. High chemical reactivity

Correct Ans: C

134. Storage of radiopharmaceuticals should be in:

- A. Plastic containers
- B. Open shelves
- C. Lead-shielded containers
- D. Glass beakers

Correct Ans: C

135. Gamma radiation is most suitable for diagnostic imaging because:

- A. It has low energy
- B. It has short range
- C. It can penetrate tissues easily
- D. It causes maximum damage

Correct Ans: C

136. Precaution while handling radioactive substances includes:

- A. Direct hand contact
- B. Using protective shielding and distance
- C. Heating the substance
- D. Diluting with water

Correct Ans: B

137. Radiopharmaceuticals should be labeled with:

- A. Only drug name
- B. Only batch number
- C. Radioactivity and time of calibration
- D. Price

Correct Ans: C

138. Radioactivity decreases with time according to:

- A. Linear law
- B. Zero-order kinetics
- C. First-order kinetics
- D. Second-order kinetics

Correct Ans: C

139. Which radiation causes maximum biological damage?

- A. Gamma
- B. Alpha
- C. Beta
- D. X-ray

Correct Ans: B

140. Radiopharmaceuticals are mainly used for:

- A. Drug delivery
- B. Nutrition
- C. Diagnosis and therapy
- D. Anesthesia

Correct Ans: C

141. Sodium iodide I¹³¹ emits mainly:

- A. Alpha rays
- B. Beta rays only
- C. Gamma rays only
- D. Beta and gamma rays

Correct Ans: D

142. One Curie corresponds to:

- A. 10⁶ disintegrations/sec
- B. 10⁹ disintegrations/sec
- C. 3.7 × 10¹⁰ disintegrations/sec

D. 1 disintegration/sec

Correct Ans: C

143. Radiopharmaceuticals should be transported:

- A. Without labeling
- B. In open containers
- C. According to radiation safety guidelines
- D. With food items

Correct Ans: C

144. Which factor does NOT affect radioactive decay?

- A. Temperature
- B. Pressure
- C. Chemical state
- D. All of the above

Correct Ans: D

145. The biological half-life refers to:

- A. Nuclear decay only
- B. Time required for half of the substance to be eliminated biologically
- C. Physical decay
- D. Chemical decomposition

Correct Ans: B

146. Effective half-life depends on:

- A. Physical half-life only
- B. Biological half-life only
- C. Both physical and biological half-lives
- D. Chemical stability

Correct Ans: C

147. Radiopharmaceutical contamination can be minimized by:

- A. Eating near work area
- B. Good laboratory practices
- C. Storing in open area
- D. Reusing syringes

Correct Ans: B

148. Personnel handling radiopharmaceuticals should wear:

- A. Cotton gloves
- B. Apron only
- C. Dosimeter badge
- D. Mask only

Correct Ans: C

149. Disposal of radioactive waste should follow:

- A. Municipal rules
- B. Hospital policy only
- C. Radiation safety regulations
- D. Pharmacy rules

Correct Ans: C

150. Main pharmaceutical application of radioisotopes is in:

- A. Formulation stability
- B. Drug synthesis
- C. Diagnosis and treatment of diseases
- D. Packaging

Correct Ans: C



**BP105T.Communication
Skills**

1. Communication is best defined as:

- A. Exchange of written messages
- B. Transfer of information from one person to another
- C. Process of sharing ideas, information and feelings
- D. Speaking in public

Correct Ans: C

2. Importance of communication lies in:

- A. Improving handwriting
- B. Increasing memory
- C. Building relationships and understanding
- D. Reducing workload

Correct Ans: C

3. The first element in the communication process is:

- A. Message
- B. Channel
- C. Receiver
- D. Source

Correct Ans: D

4. Encoding refers to:

- A. Receiving the message
- B. Converting ideas into symbols or words
- C. Giving feedback
- D. Understanding the message

Correct Ans: B

5. The medium through which message travels is called:

- A. Feedback
- B. Context
- C. Channel
- D. Receiver

Correct Ans: C

6. Decoding is the process of:

- A. Sending message
- B. Encoding symbols
- C. Interpreting the message by receiver

- D. Giving response

Correct Ans: C

7. Feedback in communication means:

- A. Interruption
- B. Response from sender
- C. Response from receiver
- D. Noise

Correct Ans: C

8. Context in communication includes:

- A. Language only
- B. Environment only
- C. Emotions only
- D. Situation and surroundings

Correct Ans: D

9. Hearing impairment is an example of:

- A. Physical barrier
- B. Cultural barrier
- C. Physiological barrier
- D. Emotional barrier

Correct Ans: C

10. Noise in surroundings is a:

- A. Psychological barrier
- B. Physical barrier
- C. Cultural barrier
- D. Language barrier

Correct Ans: B

11. Difference in customs and beliefs causes:

- A. Language barrier
- B. Emotional barrier
- C. Cultural barrier
- D. Physiological barrier

Correct Ans: C

12. Use of unfamiliar words creates:

- A. Gender barrier
- B. Physical barrier
- C. Language barrier

D. Psychological barrier

Correct Ans: C

13. Gender discrimination in communication is known as:

A. Emotional barrier

B. Gender barrier

C. Cultural barrier

D. Physical barrier

Correct Ans: B

14. Misunderstanding between individuals is due to:

A. Physical barrier

B. Interpersonal barrier

C. Physiological barrier

D. Environmental barrier

Correct Ans: B

15. Stress and anxiety cause:

A. Language barrier

B. Cultural barrier

C. Psychological barrier

D. Physical barrier

Correct Ans: C

16. Anger affecting communication is an example of:

A. Physiological barrier

B. Emotional barrier

C. Physical barrier

D. Gender barrier

Correct Ans: B

17. Perspective in communication refers to:

A. Speaking skill

B. Listening skill

C. Way of seeing and interpreting messages

D. Writing ability

Correct Ans: C

18. Visual perception involves:

A. Hearing

B. Smelling

C. Seeing and interpreting visuals

D. Touching

Correct Ans: C

19. Language affects perspective because:

A. It improves memory

B. It shapes meaning and understanding

C. It increases speed

D. It reduces noise

Correct Ans: B

20. Past experiences influence communication by:

A. Improving pronunciation

B. Shaping interpretation of messages

C. Reducing barriers

D. Eliminating noise

Correct Ans: B

21. Prejudices in communication lead to:

A. Clear understanding

B. Effective feedback

C. Biased interpretation

D. Accurate decoding

Correct Ans: C

22. Feelings affecting communication come under:

A. Language factors

B. Environmental factors

C. Psychological factors

D. Physical factors

Correct Ans: C

23. Environment affecting communication includes:

A. Attitude

B. Emotion

C. Language

D. Noise and setting

Correct Ans: D

24. Effective communication requires:

- A. Speaking fast
- B. Clear perception and understanding
- C. Loud voice
- D. Long messages

Correct Ans: B

25. Which factor does NOT affect perspective?

- A. Past experience
- B. Feelings
- C. Environment
- D. Age only

Correct Ans: D

26. Visual perception errors may lead to:

- A. Effective communication
- B. Misinterpretation
- C. Better understanding
- D. Strong feedback

Correct Ans: B

27. Cultural background influences:

- A. Encoding only
- B. Channel only
- C. Perspective and interpretation
- D. Feedback only

Correct Ans: C

28. Good communication reduces:

- A. Knowledge
- B. Confidence
- C. Misunderstanding
- D. Interaction

Correct Ans: C

29. Communication becomes ineffective when:

- A. Feedback is present
- B. Message is clear

C. Barriers are ignored

D. Context is understood

Correct Ans: C

30. Perspective differs mainly due to:

- A. Same experiences
- B. Same language
- C. Individual differences
- D. Same culture

Correct Ans: C

31. Face-to-face communication is most effective because it allows:

- A. Only verbal interaction
- B. Written confirmation
- C. Immediate feedback and non-verbal cues
- D. One-way communication

Correct Answer: C

32. Tone of voice in communication mainly reflects the speaker's:

- A. Emotional state
- B. Vocabulary
- C. Educational background
- D. Social status

Correct Answer: A

33. Which of the following is an example of non-verbal communication?

- A. Email
- B. Telephone call
- C. Body posture
- D. Report writing

Correct Answer: C

34. Body language includes all EXCEPT:

- A. Facial expressions
- B. Gestures
- C. Eye contact
- D. Grammar

Correct Answer: D

35. Verbal communication refers to:

- A. Communication using gestures only
- B. Communication using written symbols
- C. Communication using spoken words
- D. Communication without words

Correct Answer: C

36. Physical communication mainly involves:

- A. Touch and physical distance
- B. Spoken language
- C. Written messages
- D. Visual symbols

Correct Answer: A

37. Which factor plays the MOST important role in face-to-face communication?

- A. Font size
- B. Body language
- C. Internet speed
- D. Grammar rules

Correct Answer: B

38. An aggressive tone of voice may convey:

- A. Confidence
- B. Politeness
- C. Anger
- D. Sympathy

Correct Answer: C

39. Communication styles are best described as:

- A. Fixed personality traits
- B. Methods of dressing
- C. Patterns of expressing ideas
- D. Language skills only

Correct Answer: C

40. The Communication Styles Matrix helps to:

- A. Improve handwriting
- B. Analyze speaking speed

- C. Understand interaction behaviors
- D. Reduce grammar errors

Correct Answer: C

41. A person who is clear, confident, and to-the-point follows which style?

- A. Considerate
- B. Spirited
- C. Direct
- D. Systematic

Correct Answer: C

42. Spirited communication style is characterized by:

- A. Logical thinking
- B. Emotional sensitivity
- C. Enthusiasm and expressiveness
- D. Silence

Correct Answer: C

43. Which communication style focuses on facts, data, and structure?

- A. Direct
- B. Spirited
- C. Considerate
- D. Systematic

Correct Answer: D

44. A considerate communicator is MOST likely to:

- A. Dominate discussions
- B. Ignore others' feelings
- C. Be supportive and empathetic
- D. Avoid communication

Correct Answer: C

45. Which style values harmony and relationships?

- A. Direct
- B. Spirited
- C. Systematic
- D. Considerate

Correct Answer: D

46. Excessive use of gestures may result in:

- A. Clear communication
- B. Misinterpretation
- C. Improved listening
- D. Written clarity

Correct Answer: B

47. Which of the following improves verbal communication?

- A. Speaking very fast
- B. Using unclear words
- C. Proper pronunciation
- D. Avoiding eye contact

Correct Answer: C

48. Personal space during communication is related to:

- A. Verbal communication
- B. Physical communication
- C. Written communication
- D. Visual communication

Correct Answer: B

49. An effective communicator adapts communication style based on:

- A. Personal mood only
- B. Audience and situation
- C. Language preference
- D. Writing skills

Correct Answer: B

50. Which communication style is best for analytical tasks?

- A. Spirited
- B. Direct
- C. Considerate
- D. Systematic

Correct Answer: D

51. Loud tone of voice may indicate:

- A. Nervousness
- B. Confidence or aggression
- C. Silence

D. Confusion only

Correct Answer: B

52. Non-verbal communication supports verbal communication by:

- A. Replacing words
- B. Creating confusion
- C. Reinforcing the message
- D. Avoiding interaction

Correct Answer: C

53. Communication styles are NOT influenced by:

- A. Culture
- B. Personality
- C. Situation
- D. Blood group

Correct Answer: D

54. Which style prefers quick decisions and action?

- A. Considerate
- B. Systematic
- C. Spirited
- D. Direct

Correct Answer: D

55. A highly expressive speaker usually follows:

- A. Direct style
- B. Spirited style
- C. Systematic style
- D. Passive style

Correct Answer: B

56. Effective body language should be:

- A. Conflicting with words
- B. Natural and supportive
- C. Over-exaggerated
- D. Completely avoided

Correct Answer: B

57. The MOST suitable style for teamwork is:

- A. Direct
 - B. Spirited
 - C. Considerate
 - D. Systematic
- Correct Answer: C*

58. Verbal communication becomes ineffective when:

- A. Vocabulary is simple
 - B. Tone is appropriate
 - C. Message is unclear
 - D. Feedback is present
- Correct Answer: C*

59. Understanding communication styles helps to:

- A. Win arguments only
 - B. Improve interpersonal relations
 - C. Avoid communication
 - D. Reduce vocabulary
- Correct Answer: B*

60. Which element is essential in all forms of communication?

- A. Written text
 - B. Message
 - C. Technology
 - D. Formal language
- Correct Answer: B*

UNIT–III: Basic Listening Skills & Effective Written Communication (61–90)

61. What is the primary purpose of listening in communication?

- A. To respond quickly
 - B. To judge the speaker
 - C. To understand the message clearly
 - D. To control the conversation
- Correct Answer: C*

62. Self-awareness in listening mainly refers to:

- A. Knowing the speaker personally
 - B. Being aware of one's own emotions and biases
 - C. Improving vocabulary
 - D. Increasing speaking speed
- Correct Answer: B*

63. Which of the following is a key feature of active listening?

- A. Interrupting frequently
 - B. Maintaining eye contact
 - C. Ignoring non-verbal cues
 - D. Thinking about reply
- Correct Answer: B*

64. Active listening helps mainly in:

- A. Winning arguments
 - B. Saving time
 - C. Improving mutual understanding
 - D. Reducing vocabulary errors
- Correct Answer: C*

65. Which skill is essential for becoming an effective listener?

- A. Fast speaking
 - B. Emotional intelligence
 - C. Loud voice
 - D. Writing ability
- Correct Answer: B*

66. Listening in difficult situations requires:

- A. Emotional control
 - B. Speaking dominance
 - C. Ignoring feedback
 - D. Argument skills
- Correct Answer: A*

67. What should an active listener avoid?

- A. Asking questions
- B. Giving feedback
- C. Jumping to conclusions

D. Maintaining attention

Correct Answer: C

68. Which of the following improves listening effectiveness?

- A. Multitasking
- B. Daydreaming
- C. Clarifying doubts
- D. Interrupting

Correct Answer: C

69. Written communication is most suitable when:

- A. Immediate feedback is required
- B. The topic is complex
- C. Emotional issues are involved
- D. Informal discussion is needed

Correct Answer: B

70. Written communication should be avoided when:

- A. Record keeping is needed
- B. Formal message is required
- C. Immediate discussion is necessary
- D. Accuracy is important

Correct Answer: C

71. Which factor affects the choice of written communication?

- A. Speaker's accent
- B. Amount of discussion required
- C. Voice modulation
- D. Eye contact

Correct Answer: B

72. Written communication is best described as:

- A. Informal and flexible
- B. Permanent and structured
- C. Emotional and expressive
- D. Instant and verbal

Correct Answer: B

73. Subject line in written communication should be:

- A. Long and detailed
- B. Creative and funny
- C. Clear and specific
- D. Technical only

Correct Answer: C

74. "Put the main point first" means:

- A. Ending with conclusion
- B. Highlighting background first
- C. Starting with key message
- D. Adding examples first

Correct Answer: C

75. Knowing your audience helps in:

- A. Increasing message length
- B. Using appropriate tone
- C. Making message complex
- D. Avoiding structure

Correct Answer: B

76. Effective organization of a message includes:

- A. Random flow of ideas
- B. Clear introduction and conclusion
- C. Repetition of points
- D. Excessive details

Correct Answer: B

77. Which of the following improves clarity in writing?

- A. Complex sentences
- B. Use of jargon
- C. Logical sequencing
- D. Emotional language

Correct Answer: C

78. Formal written communication generally uses:

- A. Slang language
- B. Personal opinions
- C. Professional tone

D. Symbols and emojis

Correct Answer: C

79. Written communication provides:

- A. Immediate response
- B. Permanent record
- C. Emotional bonding
- D. Non-verbal cues

Correct Answer: B

80. Which is NOT an advantage of written communication?

- A. Legal evidence
- B. Long-term reference
- C. Immediate clarification
- D. Uniform message

Correct Answer: C

81. Effective listening requires:

- A. Selective hearing
- B. Full concentration
- C. Speaker dominance
- D. Frequent interruption

Correct Answer: B

82. Active listening encourages:

- A. Conflict
- B. Misunderstanding
- C. Feedback
- D. Disinterest

Correct Answer: C

83. Which habit negatively affects listening?

- A. Empathy
- B. Patience
- C. Prejudgment
- D. Clarification

Correct Answer: C

84. Listening with understanding means:

- A. Hearing words only
- B. Understanding emotions and meaning

C. Remembering facts only

D. Preparing reply

Correct Answer: B

85. Written messages should be:

- A. Lengthy
- B. Ambiguous
- C. Concise
- D. Emotional

Correct Answer: C

86. Formal written communication is commonly used in:

- A. Casual talks
- B. Official letters
- C. Telephone calls
- D. Group discussions

Correct Answer: B

87. Active listening mainly improves:

- A. Writing speed
- B. Communication effectiveness
- C. Reading skills
- D. Vocabulary size

Correct Answer: B

88. Which element is important while writing effectively?

- A. Audience awareness
- B. Voice modulation
- C. Facial expression
- D. Gestures

Correct Answer: A

89. Good listening reduces:

- A. Knowledge
- B. Miscommunication
- C. Feedback
- D. Interaction

Correct Answer: B

90. The main goal of effective written communication is:

- A. Decoration of language

- B. Entertainment
 - C. Clear transmission of message
 - D. Increasing word count
- Correct Answer: C*

UNIT-IV: Interview Skills & Giving Presentations (91-120)

91. What is the primary purpose of an interview?

- A. To criticize the candidate
- B. To test writing skills
- C. To evaluate suitability for a role
- D. To provide training

Correct Answer: C

92. An interview helps the employer to assess:

- A. Candidate's family background
- B. Candidate's personal lifestyle
- C. Skills, attitude, and competence
- D. Candidate's social media presence

Correct Answer: C

93. Which of the following is a DO during an interview?

- A. Arriving late
- B. Maintaining eye contact
- C. Interrupting the interviewer
- D. Using slang language

Correct Answer: B

94. Which of the following is a DON'T during an interview?

- A. Being confident
- B. Dressing professionally
- C. Checking phone frequently
- D. Answering clearly

Correct Answer: C

95. Proper body language during an interview shows:

- A. Arrogance
- B. Nervousness

- C. Confidence
 - D. Confusion
- Correct Answer: C*

96. Preparing for an interview mainly involves:

- A. Memorizing answers only
- B. Learning about the organization
- C. Avoiding questions
- D. Speaking very fast

Correct Answer: B

97. A firm handshake in an interview indicates:

- A. Aggression
- B. Overconfidence
- C. Professionalism
- D. Carelessness

Correct Answer: C

98. Answering honestly in an interview helps to build:

- A. Tension
- B. Trust
- C. Fear
- D. Pressure

Correct Answer: B

99. What should be avoided while answering interview questions?

- A. Being concise
- B. Giving relevant examples
- C. Negative comments about previous employer
- D. Maintaining clarity

Correct Answer: C

100. Listening carefully during an interview helps to:

- A. Delay responses
- B. Misinterpret questions
- C. Answer accurately
- D. Dominate discussion

Correct Answer: C

101. The first step in preparing a presentation is:

- A. Delivering content
- B. Planning the presentation
- C. Using visual aids
- D. Answering questions

Correct Answer: B

102. Fear during presentations can be reduced by:

- A. Avoiding eye contact
- B. Lack of preparation
- C. Practice and rehearsal
- D. Speaking very fast

Correct Answer: C

103. A well-structured presentation includes:

- A. Only conclusion
- B. Random ideas
- C. Introduction, body, and conclusion
- D. Excessive details

Correct Answer: C

104. Visual aids in a presentation help to:

- A. Distract audience
- B. Increase confusion
- C. Improve understanding
- D. Reduce credibility

Correct Answer: C

105. Effective delivery of a presentation requires:

- A. Monotonous voice
- B. Proper voice modulation
- C. Reading slides continuously
- D. Avoiding audience interaction

Correct Answer: B

106. Eye contact during a presentation helps to:

- A. Create boredom
- B. Build connection with audience

- C. Increase nervousness
- D. Reduce confidence

Correct Answer: B

107. Which technique helps in engaging the audience?

- A. Speaking softly
- B. Asking relevant questions
- C. Avoiding gestures
- D. Reading notes

Correct Answer: B

108. Overloading slides with text may lead to:

- A. Better clarity
- B. Increased interest
- C. Audience distraction
- D. Improved retention

Correct Answer: C

109. Handling questions confidently shows:

- A. Weak preparation
- B. Lack of knowledge
- C. Mastery of subject
- D. Poor communication

Correct Answer: C

110. Nervousness before a presentation is:

- A. Always harmful
- B. Uncommon
- C. Natural and manageable
- D. A sign of failure

Correct Answer: C

111. Proper posture during presentation conveys:

- A. Laziness
- B. Confidence
- C. Confusion
- D. Fear

Correct Answer: B

112. Speaking too fast during presentation may cause:

- A. Better engagement
- B. Misunderstanding
- C. Improved clarity
- D. Strong impact

Correct Answer: B

113. Pauses during a presentation help to:

- A. Waste time
- B. Confuse audience
- C. Emphasize key points
- D. Reduce credibility

Correct Answer: C

114. Effective presentations should be:

- A. Audience-centered
- B. Speaker-centered only
- C. Very lengthy
- D. Highly technical always

Correct Answer: A

115. Rehearsing a presentation helps to:

- A. Increase fear
- B. Reduce preparation
- C. Improve confidence
- D. Avoid interaction

Correct Answer: C

116. Gestures during presentation should be:

- A. Excessive
- B. Absent
- C. Natural and supportive
- D. Confusing

Correct Answer: C

117. Ending a presentation effectively involves:

- A. Abrupt ending
- B. Clear summary and conclusion
- C. Introducing new topic

D. Reading slides

Correct Answer: B

118. Audience feedback during presentation helps to:

- A. Interrupt flow
- B. Improve communication
- C. Increase nervousness
- D. Reduce clarity

Correct Answer: B

119. Confidence in presentation mainly comes from:

- A. Loud voice
- B. Proper preparation
- C. Complex slides
- D. Long duration

Correct Answer: B

120. The ultimate goal of a presentation is to:

- A. Impress only
- B. Entertain only
- C. Communicate message effectively
- D. Finish quickly

Correct Answer: C

121. Group discussion is mainly conducted to assess:

- A. Individual writing skills
- B. Leadership and communication skills
- C. Memory power
- D. Technical knowledge only

Correct Answer: B

122. Effective communication in a group discussion requires:

- A. Speaking continuously
- B. Dominating others
- C. Listening to others
- D. Ignoring opinions

Correct Answer: C

123. The ideal number of participants in a group discussion is:

- A. 2–3
- B. 4–5
- C. 8–12
- D. More than 20

Correct Answer: C

124. Which of the following is a DO in group discussion?

- A. Interrupting frequently
- B. Staying silent
- C. Expressing ideas clearly
- D. Arguing aggressively

Correct Answer: C

125. A good group discussion participant should be:

- A. Aggressive
- B. Passive
- C. Confident and cooperative
- D. Overconfident

Correct Answer: C

126. Listening carefully in a group discussion helps to:

- A. Delay responses
- B. Ignore viewpoints
- C. Respond logically
- D. Dominate the discussion

Correct Answer: C

127. Which behavior should be avoided in group discussion?

- A. Supporting ideas with facts
- B. Maintaining eye contact
- C. Interrupting other speakers
- D. Speaking clearly

Correct Answer: C

128. Body language in group discussion should be:

- A. Closed and rigid
- B. Natural and positive

- C. Aggressive
- D. Distracting

Correct Answer: B

129. Initiating a group discussion shows:

- A. Fear
- B. Leadership quality
- C. Confusion
- D. Disinterest

Correct Answer: B

130. Effective participation in group discussion depends on:

- A. Loud voice
- B. Speaking speed
- C. Content and clarity
- D. Hand gestures only

Correct Answer: C

131. Logical thinking in a group discussion helps to:

- A. Confuse others
- B. Strengthen arguments
- C. Delay conclusion
- D. Avoid participation

Correct Answer: B

132. Respecting others' opinions in group discussion reflects:

- A. Weakness
- B. Arrogance
- C. Maturity
- D. Insecurity

Correct Answer: C

133. Summarizing the discussion at the end shows:

- A. Dominance
- B. Confusion
- C. Leadership
- D. Nervousness

Correct Answer: C

134. Time management in group discussion means:

- A. Speaking throughout
- B. Avoiding discussion
- C. Speaking within limits
- D. Ignoring topic

Correct Answer: C

135. Eye contact during group discussion helps in:

- A. Creating conflict
- B. Showing confidence
- C. Distracting others
- D. Avoiding participation

Correct Answer: B

136. A successful group discussion is one where:

- A. One person dominates
- B. No one speaks
- C. All members participate
- D. Topic is ignored

Correct Answer: C

137. Emotional control in group discussion is important to:

- A. Win arguments
- B. Maintain professionalism
- C. Suppress ideas
- D. Avoid speaking

Correct Answer: B

138. Which factor improves effectiveness of group discussion?

- A. Interruptions
- B. Aggressive tone
- C. Clear understanding of topic
- D. Speaking very fast

Correct Answer: C

139. Disagreeing politely in group discussion shows:

- A. Rudeness
- B. Confidence

- C. Lack of knowledge
- D. Disrespect

Correct Answer: B

140. Group discussion mainly evaluates:

- A. Individual performance only
- B. Teamwork skills
- C. Writing ability
- D. Technical skills only

Correct Answer: B

141. Which is a DON'T in group discussion?

- A. Supporting points with examples
- B. Listening patiently
- C. Personal attacks
- D. Maintaining relevance

Correct Answer: C

142. Speaking with clarity in group discussion helps to:

- A. Increase confusion
- B. Convey ideas effectively
- C. Reduce confidence
- D. Distract group

Correct Answer: B

143. Participation without dominating shows:

- A. Leadership balance
- B. Lack of interest
- C. Fear
- D. Confusion

Correct Answer: A

144. Group discussion is a test of:

- A. Memory skills
- B. Communication and interpersonal skills
- C. Handwriting
- D. Reading speed

Correct Answer: B

145. A calm attitude during group discussion helps to:

- A. Escalate conflict
- B. Maintain focus
- C. Avoid participation
- D. End discussion early

Correct Answer: B

D. Silence

Correct Answer: C

146. Preparation before group discussion includes:

- A. Memorizing speeches
- B. Reading widely
- C. Ignoring current topics
- D. Planning to dominate

Correct Answer: B

147. Constructive criticism in group discussion should be:

- A. Harsh
- B. Personal
- C. Respectful
- D. Emotional

Correct Answer: C

148. Confidence in group discussion mainly comes from:

- A. Loud voice
- B. Proper knowledge of topic
- C. Interruptions
- D. Speed of speech

Correct Answer: B

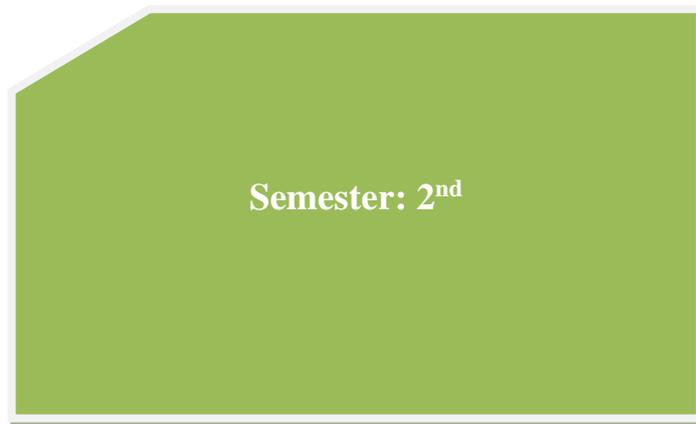
149. The role of a moderator in group discussion is to:

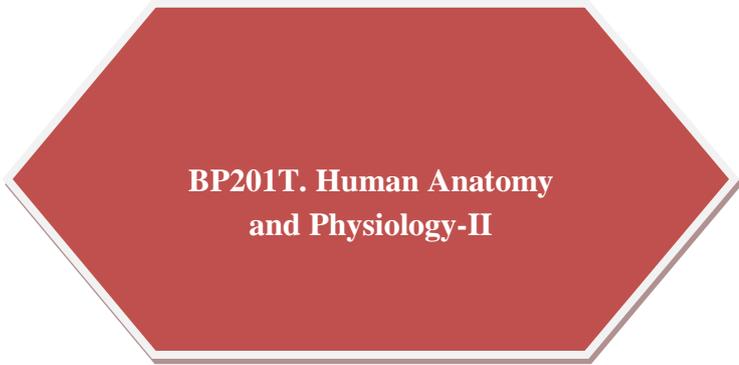
- A. Dominate discussion
- B. Take sides
- C. Facilitate smooth discussion
- D. Remain silent

Correct Answer: C

150. The final outcome of an effective group discussion is:

- A. Conflict
- B. Confusion
- C. Mutual understanding





**BP201T. Human Anatomy
and Physiology-II**

1. The structural and functional unit of the nervous system is:

- A. Neuroglia
- B. Neuron
- C. Synapse
- D. Nerve fiber

Correct answer: B

2. Which part of neuron receives impulses?

- A. Axon
- B. Cell body
- C. Dendrite
- D. Myelin sheath

Correct answer: C

3. Myelin sheath in CNS is formed by:

- A. Schwann cells
- B. Oligodendrocytes
- C. Astrocytes
- D. Microglia

Correct answer: B

4. Saltatory conduction occurs in:

- A. Unmyelinated fibers
- B. Myelinated fibers
- C. Sensory fibers
- D. Motor fibers

Correct answer: B

5. Resting membrane potential is mainly due to:

- A. Sodium ions
- B. Calcium ions
- C. Potassium ions
- D. Chloride ions

Correct answer: C

6. Normal resting membrane potential of neuron is about:

- A. -40 mV
- B. -70 mV
- C. +30 mV

D. -90 mV

Correct answer: B

7. During depolarization, there is increased permeability to:

- A. K^+
- B. Cl^-
- C. Na^+
- D. Ca^{2+}

Correct answer: C

8. The refractory period prevents:

- A. Fatigue
- B. Backward conduction
- C. Forward conduction
- D. Synaptic delay

Correct answer: B

9. Chemical transmission occurs at:

- A. Axon
- B. Dendrite
- C. Synapse
- D. Node of Ranvier

Correct answer: C

10. Acetylcholine is an example of:

- A. Enzyme
- B. Hormone
- C. Neurotransmitter
- D. Receptor

Correct answer: C

11. Which neurotransmitter is inhibitory in CNS?

- A. Dopamine
- B. GABA
- C. Acetylcholine
- D. Noradrenaline

Correct answer: B

12. Synaptic delay is due to:

- A. Action potential
- B. Neurotransmitter release
- C. Ion movement

D. Myelination

Correct answer: B

13. Receptors are specialized for:

- A. Conducting impulses
- B. Transmitting impulses
- C. Receiving stimuli
- D. Producing neurotransmitters

Correct answer: C

14. CSF is mainly produced by:

- A. Arachnoid villi
- B. Choroid plexus
- C. Pia mater
- D. Dura mater

Correct answer: B

15. Normal CSF pressure is:

- A. 20–40 mmHg
- B. 60–80 mmHg
- C. 100–180 mmHg
- D. 200–250 mmHg

Correct answer: C

16. Largest part of brain is:

- A. Cerebellum
- B. Brain stem
- C. Cerebrum
- D. Thalamus

Correct answer: C

17. Cerebellum is concerned with:

- A. Vision
- B. Balance and coordination
- C. Memory
- D. Hearing

Correct answer: B

18. Brain stem consists of:

- A. Midbrain, pons, medulla
- B. Cerebrum and pons
- C. Cerebellum and medulla
- D. Thalamus and hypothalamus

Correct answer: A

19. Spinal cord ends at:

- A. L1–L2 vertebra
- B. L3–L4 vertebra
- C. T12 vertebra
- D. S1 vertebra

Correct answer: A

20. Grey matter of spinal cord is arranged in:

- A. Columns
- B. Tracts
- C. Butterfly shape
- D. Circular pattern

Correct answer: C

21. Afferent nerve fibers carry impulses:

- A. From CNS to muscle
- B. From CNS to gland
- C. From receptor to CNS
- D. From CNS to receptor

Correct answer: C

22. Efferent fibers carry impulses:

- A. From CNS to effector
- B. From receptor to CNS
- C. From brain to brain
- D. From spinal cord to brain

Correct answer: A

23. Reflex action is:

- A. Voluntary
- B. Involuntary
- C. Learned
- D. Conscious

Correct answer: B

24. Stretch reflex is an example of:

- A. Polysynaptic reflex
- B. Conditioned reflex
- C. Monosynaptic reflex
- D. Autonomic reflex

Correct answer: C

25. Knee jerk reflex center is at:

- A. L1–L2
- B. L2–L4
- C. T12–L1
- D. S1–S2

Correct answer: B

26. Autonomic nervous system controls:

- A. Skeletal muscles
- B. Voluntary actions
- C. Smooth muscles
- D. Conscious actions

Correct answer: C

27. Sympathetic neurotransmitter is mainly:

- A. Acetylcholine
- B. GABA
- C. Noradrenaline
- D. Dopamine

Correct answer: C

28. Parasympathetic system causes:

- A. Increased heart rate
- B. Bronchodilation
- C. Pupil dilation
- D. Decreased heart rate

Correct answer: D

29. Neuroglia function is to:

- A. Conduct impulses
- B. Support neurons
- C. Produce action potential
- D. Release hormones

Correct answer: B

30. Node of Ranvier is present in:

- A. Unmyelinated fiber
- B. Dendrite
- C. Myelinated axon
- D. Cell body

Correct answer: C

31. The stomach secretes:

- A. Amylase
- B. Pepsin
- C. Trypsin
- D. Lipase

Correct answer: B

32. Hydrochloric acid in stomach is secreted by:

- A. Chief cells
- B. Parietal cells
- C. Goblet cells
- D. G cells

Correct answer: B

33. Pepsin digests:

- A. Fats
- B. Proteins
- C. Carbohydrates
- D. Vitamins

Correct answer: B

34. Acid secretion is stimulated by:

- A. Secretin
- B. Gastrin
- C. Insulin
- D. Glucagon

Correct answer: B

35. Parasympathetic stimulation increases:

- A. Acid secretion
- B. Heart rate
- C. Blood pressure
- D. Glycogenolysis

Correct answer: A

36. Main site of digestion is:

- A. Stomach
- B. Large intestine
- C. Small intestine
- D. Esophagus

Correct answer: C

37. Bile is produced by:

- A. Pancreas
- B. Gall bladder
- C. Liver
- D. Duodenum

Correct answer: C

38. Bile helps in:

- A. Protein digestion
- B. Fat emulsification
- C. Carbohydrate digestion
- D. Vitamin synthesis

Correct answer: B

39. Pancreatic juice contains:

- A. Pepsin
- B. Amylase, lipase, trypsin
- C. Rennin
- D. Maltase

Correct answer: B

40. Insulin is secreted by:

- A. Alpha cells
- B. Beta cells
- C. Delta cells
- D. Acinar cells

Correct answer: B

41. Absorption of nutrients mainly occurs in:

- A. Duodenum
- B. Jejunum
- C. Ileum
- D. Colon

Correct answer: B

42. Vitamin B12 absorption requires:

- A. Bile salts
- B. Intrinsic factor
- C. Lipase
- D. Pepsin

Correct answer: B

43. Peristalsis refers to:

- A. Segmentation movement
- B. Mixing movement
- C. Propulsive movement
- D. Reverse movement

Correct answer: C

44. Large intestine mainly absorbs:

- A. Proteins
- B. Fats
- C. Water and electrolytes
- D. Glucose

Correct answer: C

45. Disorder characterized by acid reflux is:

- A. Peptic ulcer
- B. GERD
- C. Diarrhea
- D. Constipation

Correct answer: B

46. ATP is the energy currency of:

- A. Cell membrane
- B. Cytoplasm
- C. Cell
- D. Mitochondria

Correct answer: C

47. ATP is formed mainly in:

- A. Nucleus
- B. Ribosome
- C. Mitochondria
- D. Lysosome

Correct answer: C

48. Creatine phosphate acts as:

- A. Enzyme
- B. Energy reservoir
- C. Hormone
- D. Vitamin

Correct answer: B

49. BMR stands for:

- A. Basal metabolic rate
- B. Body muscle ratio
- C. Blood metabolism rate
- D. Basal muscle response

Correct answer: A

50. BMR is measured under:

- A. Physical activity
- B. Post meal
- C. Complete rest
- D. Exercise

Correct answer: C

51. Primary function of lungs is:

- A. Digestion
- B. Respiration
- C. Circulation
- D. Excretion

Correct answer: B

52. Functional unit of lung is:

- A. Bronchi
- B. Bronchioles
- C. Alveoli
- D. Trachea

Correct answer: C

53. Surfactant reduces:

- A. Blood pressure
- B. Surface tension
- C. Lung volume
- D. Oxygen transport

Correct answer: B

54. Inspiration is an:

- A. Passive process
- B. Active process
- C. Voluntary process
- D. Reflex process

Correct answer: B

55. Expiration at rest is:

- A. Active

- B. Passive
- C. Forced
- D. Voluntary

Correct answer: B

56. Respiratory center is located in:

- A. Cerebrum
- B. Cerebellum
- C. Medulla
- D. Spinal cord

Correct answer: C

57. Normal respiratory rate is:

- A. 5–10/min
- B. 12–18/min
- C. 20–30/min
- D. 30–40/min

Correct answer: B

58. Tidal volume is about:

- A. 150 ml
- B. 300 ml
- C. 500 ml
- D. 1000 ml

Correct answer: C

59. Oxygen is transported mainly by:

- A. Plasma
- B. RBC
- C. Platelets
- D. WBC

Correct answer: B

60. Carbon dioxide is transported mainly as:

- A. Carbamino compound
- B. Dissolved gas
- C. Bicarbonate
- D. Carbonic acid

Correct answer: C

61. Artificial respiration is used in:

- A. Heart failure
- B. Respiratory failure

C. Kidney failure

D. Liver failure

Correct answer: B

62. CPR includes:

A. Chest compression only

B. Mouth to mouth only

C. Both A and B

D. Oxygen therapy

Correct answer: C

63. Kidney is a part of:

A. Digestive system

B. Respiratory system

C. Urinary system

D. Endocrine system

Correct answer: C

64. Functional unit of kidney is:

A. Neuron

B. Nephron

C. Alveoli

D. Acinus

Correct answer: B

65. Glomerular filtration occurs in:

A. Loop of Henle

B. Collecting duct

C. Glomerulus

D. PCT

Correct answer: C

66. Normal GFR is about:

A. 50 ml/min

B. 100 ml/min

C. 125 ml/min

D. 200 ml/min

Correct answer: C

67. Reabsorption of glucose occurs in:

A. DCT

B. PCT

C. Loop of Henle

D. Collecting duct

Correct answer: B

68. ADH increases:

A. Urine volume

B. Water excretion

C. Water reabsorption

D. Sodium loss

Correct answer: C

69. Micturition is controlled by:

A. Cerebrum

B. Medulla

C. Spinal cord

D. Hypothalamus

Correct answer: C

70. Kidneys regulate:

A. Acid-base balance

B. Blood pressure

C. Electrolytes

D. All of the above

Correct answer: D

71. RAS system increases:

A. Urine output

B. Blood pressure

C. Sodium excretion

D. Potassium loss

Correct answer: B

72. Renin is secreted by:

A. Liver

B. Kidney

C. Heart

D. Lungs

Correct answer: B

73. Urea is formed in:

A. Kidney

B. Liver

C. Muscle

D. Brain

Correct answer: B

74. Diuretics increase:

- A. Urine output
- B. Blood volume
- C. Sodium retention
- D. BP

Correct answer: A

75. Renal failure leads to:

- A. Acidosis
- B. Alkalosis
- C. Hypoxia
- D. Anemia only

Correct answer: A

76. Hormones are secreted by:

- A. Exocrine glands
- B. Endocrine glands
- C. Sweat glands
- D. Salivary glands

Correct answer: B

77. Hormones act through:

- A. Enzymes
- B. Receptors
- C. Nerves
- D. Synapse

Correct answer: B

78. Pituitary gland is called:

- A. Master gland
- B. Slave gland
- C. Target gland
- D. Accessory gland

Correct answer: A

79. Growth hormone deficiency causes:

- A. Gigantism
- B. Dwarfism
- C. Acromegaly
- D. Cretinism

Correct answer: B

80. Thyroxine hormone contains:

- A. Calcium

- B. Iron
- C. Iodine
- D. Sodium

Correct answer: C

81. Hypothyroidism in children causes:

- A. Acromegaly
- B. Myxedema
- C. Cretinism
- D. Goiter

Correct answer: C

82. Parathyroid hormone regulates:

- A. Sodium
- B. Calcium
- C. Potassium
- D. Chloride

Correct answer: B

83. Adrenal medulla secretes:

- A. Cortisol
- B. Aldosterone
- C. Adrenaline
- D. Progesterone

Correct answer: C

84. Aldosterone regulates:

- A. Glucose
- B. Protein
- C. Sodium and potassium
- D. Calcium

Correct answer: C

85. Insulin deficiency causes:

- A. Diabetes mellitus
- B. Diabetes insipidus
- C. Hypoglycemia
- D. Obesity

Correct answer: A

86. Pineal gland secretes:

- A. Melatonin
- B. Oxytocin
- C. Vasopressin

D. Prolactin

Correct answer: A

87. Thymus is involved in:

- A. B cell maturation
- B. T cell maturation
- C. RBC production
- D. Platelet formation

Correct answer: B

88. Hormones that act on same cell differently are:

- A. Antagonistic
- B. Synergistic
- C. Permissive
- D. Parallel

Correct answer: A

89. Steroid hormones act through:

- A. Cell membrane receptors
- B. Nuclear receptors
- C. Enzymes
- D. Second messengers only

Correct answer: B

90. Second messenger for many hormones is:

- A. ATP
- B. cAMP
- C. DNA
- D. RNA

Correct answer: B

91. Primary male sex hormone is:

- A. Estrogen
- B. Progesterone
- C. Testosterone
- D. Prolactin

Correct answer: C

92. Spermatogenesis occurs in:

- A. Epididymis
- B. Vas deferens
- C. Seminiferous tubules

D. Prostate

Correct answer: C

93. Leydig cells secrete:

- A. Estrogen
- B. Testosterone
- C. Progesterone
- D. FSH

Correct answer: B

94. Oogenesis occurs in:

- A. Uterus
- B. Ovary
- C. Fallopian tube
- D. Cervix

Correct answer: B

95. Ovulation is triggered by:

- A. FSH
- B. LH
- C. Estrogen
- D. Progesterone

Correct answer: B

96. Normal menstrual cycle duration is:

- A. 14 days
- B. 21 days
- C. 28 days
- D. 35 days

Correct answer: C

97. Fertilization normally occurs in:

- A. Ovary
- B. Uterus
- C. Cervix
- D. Fallopian tube

Correct answer: D

98. Placenta functions include:

- A. Nutrition
- B. Respiration
- C. Excretion
- D. All of the above

Correct answer: D

99. Progesterone maintains:

- A. Ovulation
- B. Pregnancy
- C. Menstruation
- D. Lactation

Correct answer: B

100. Parturition is initiated by:

- A. Oxytocin
- B. Estrogen
- C. Progesterone
- D. Prolactin

Correct answer: A

101. Chromosomes are composed of:

- A. DNA and protein
- B. RNA and protein
- C. Lipids
- D. Carbohydrates

Correct answer: A

102. Human somatic cells contain:

- A. 22 chromosomes
- B. 23 chromosomes
- C. 44 chromosomes
- D. 46 chromosomes

Correct answer: D

103. Gene is a segment of:

- A. RNA
- B. Protein
- C. DNA
- D. Lipid

Correct answer: C

104. DNA replication occurs in:

- A. Cytoplasm
- B. Ribosome
- C. Nucleus
- D. Mitochondria

Correct answer: C

105. Protein synthesis occurs at:

- A. Nucleus

- B. Ribosome
- C. Golgi apparatus
- D. Lysosome

Correct answer: B

106. mRNA carries:

- A. Amino acids
- B. Genetic code
- C. Enzymes
- D. Lipids

Correct answer: B

107. tRNA function is:

- A. Coding
- B. Decoding
- C. Energy supply
- D. Transcription

Correct answer: B

108. Dominant trait is expressed in:

- A. Homozygous only
- B. Heterozygous only
- C. Both homozygous and heterozygous
- D. Recessive state

Correct answer: C

109. Mendel worked on:

- A. Drosophila
- B. Pea plant
- C. Frog
- D. Mouse

Correct answer: B

110. Blood group inheritance is an example of:

- A. Polygenic inheritance
- B. Sex-linked inheritance
- C. Codominance
- D. Epistasis

Correct answer: C

111. White matter of spinal cord mainly contains:

- A. Neuron cell bodies

- B. Neuroglia
- C. Myelinated nerve fibers
- D. Synapses

Correct answer: C

112. Threshold potential is the minimum potential required to:

- A. Stop impulse
- B. Generate action potential
- C. Increase resting potential
- D. Close sodium channels

Correct answer: B

113. All-or-none law applies to:

- A. Synapse
- B. Action potential
- C. Receptor
- D. Reflex

Correct answer: B

114. Synapse between neuron and muscle is called:

- A. Neuroglial synapse
- B. Axo-axonic synapse
- C. Neuromuscular junction
- D. Dendrodendritic synapse

Correct answer: C

115. Acetylcholine is rapidly destroyed by:

- A. Monoamine oxidase
- B. Acetylcholinesterase
- C. Catechol-O-methyl transferase
- D. ATPase

Correct answer: B

116. Which ion causes repolarization?

- A. Na^+
- B. Ca^{2+}
- C. K^+
- D. Cl^-

Correct answer: C

117. Absolute refractory period is due to:

- A. Sodium channel inactivation
- B. Potassium influx
- C. Calcium entry
- D. Chloride exit

Correct answer: A

118. Medulla oblongata controls:

- A. Memory
- B. Balance
- C. Vital centers
- D. Vision

Correct answer: C

119. CSF protects brain by:

- A. Nutrition
- B. Cushioning effect
- C. Oxygen supply
- D. Hormone transport

Correct answer: B

120. A polysynaptic reflex contains:

- A. One synapse
- B. Two synapses
- C. Many synapses
- D. No synapse

Correct answer: C

121. Pain receptors are called:

- A. Mechanoreceptors
- B. Chemoreceptors
- C. Thermoreceptors
- D. Nociceptors

Correct answer: D

122. Which fiber conducts fastest?

- A. C fibers
- B. B fibers
- C. A-alpha fibers
- D. A-delta fibers

Correct answer: C

123. Neurotransmitter released at NMJ is:

- A. Dopamine
- B. Serotonin
- C. Acetylcholine
- D. GABA

Correct answer: C

124. Autonomic ganglia use which neurotransmitter?

- A. Dopamine
- B. Acetylcholine
- C. GABA
- D. Glycine

Correct answer: B

125. Fight-or-flight response is mediated by:

- A. Parasympathetic system
- B. Enteric system
- C. Sympathetic system
- D. Somatic system

Correct answer: C

126. Which meningeal layer is closest to brain?

- A. Dura mater
- B. Arachnoid mater
- C. Pia mater
- D. Epidural layer

Correct answer: C

127. Brain ventricles contain:

- A. Blood
- B. CSF
- C. Lymph
- D. Plasma

Correct answer: B

128. Cerebrum controls:

- A. Reflexes
- B. Balance
- C. Voluntary activities

D. Respiration

Correct answer: C

129. Crossing of nerve fibers is called:

- A. Decussation
- B. Conjugation
- C. Polarization
- D. Integration

Correct answer: A

130. Spinal reflexes are mediated through:

- A. Brain
- B. Cerebellum
- C. Spinal cord
- D. Thalamus

Correct answer: C

131. Salivary amylase digests:

- A. Proteins
- B. Fats
- C. Starch
- D. Vitamins

Correct answer: C

132. Saliva contains antibacterial enzyme:

- A. Pepsin
- B. Trypsin
- C. Lysozyme
- D. Maltase

Correct answer: C

133. Gastric juice pH is:

- A. 1–2
- B. 3–4
- C. 5–6
- D. 7–8

Correct answer: A

134. Secretin hormone stimulates secretion of:

- A. Acid
- B. Bile

- C. Pancreatic bicarbonate
- D. Pepsin

Correct answer: C

135. CCK stimulates:

- A. Gall bladder contraction
- B. Acid secretion
- C. Insulin release
- D. Peristalsis

Correct answer: A

136. Lactose intolerance is due to deficiency of:

- A. Lactase
- B. Maltase
- C. Sucrase
- D. Amylase

Correct answer: A

137. Fat absorption occurs via:

- A. Blood capillaries
- B. Lacteals
- C. Portal vein
- D. Hepatic artery

Correct answer: B

138. Diarrhea leads to:

- A. Dehydration
- B. Weight gain
- C. Alkalosis
- D. Hypertension

Correct answer: A

139. Constipation is due to:

- A. Increased motility
- B. Decreased motility
- C. Increased secretion
- D. Enzyme excess

Correct answer: B

140. ATP contains how many phosphate groups?

- A. One
- B. Two

- C. Three

- D. Four

Correct answer: C

141. Energy released by ATP hydrolysis is about:

- A. 2 kcal
- B. 7.3 kcal
- C. 15 kcal
- D. 30 kcal

Correct answer: B

142. Creatine phosphate is abundant in:

- A. Liver
- B. Brain
- C. Muscle
- D. Kidney

Correct answer: C

143. BMR decreases in:

- A. Fever
- B. Pregnancy
- C. Starvation
- D. Hyperthyroidism

Correct answer: C

144. BMR increases in:

- A. Old age
- B. Hypothyroidism
- C. Fever
- D. Sleep

Correct answer: C

145. Calorigenic hormone is:

- A. Insulin
- B. Thyroxine
- C. Estrogen
- D. Progesterone

Correct answer: B

146. Liver stores:

- A. Glycogen
- B. Insulin
- C. Enzymes

D. Hormones

Correct answer: A

147. Portal circulation connects:

- A. Heart and liver
- B. GIT and liver
- C. Liver and kidney
- D. Lung and heart

Correct answer: B

148. Hunger center is located in:

- A. Medulla
- B. Hypothalamus
- C. Cerebellum
- D. Pons

Correct answer: B

149. Satiety center is located in:

- A. Thalamus
- B. Hypothalamus
- C. Cerebrum
- D. Medulla

Correct answer: B

150. Obesity is associated with increased:

- A. BMR
- B. Fat storage
- C. Muscle mass
- D. Heat loss

Correct answer: B

151. Maximum oxygen is carried as:

- A. Dissolved oxygen
- B. Oxyhemoglobin
- C. Carbaminohemoglobin
- D. Bicarbonate

Correct answer: B

152. Hypoxia means:

- A. Low CO₂
- B. Low oxygen
- C. High oxygen

D. High CO₂

Correct answer: B

153. Normal urine pH is:

- A. 3
- B. 5–6
- C. 8
- D. 9

Correct answer: B

154. Diabetes insipidus is due to lack of:

- A. Insulin
- B. ADH
- C. Aldosterone
- D. Cortisol

Correct answer: B

155. Endocrine glands are ductless because hormones enter:

- A. Lymph
- B. Blood
- C. CSF
- D. Tissue fluid only

Correct answer: B

156. Oxytocin causes:

- A. Milk production
- B. Milk ejection
- C. Ovulation
- D. Spermatogenesis

Correct answer: B

157. Prolactin stimulates:

- A. Ovulation
- B. Lactation
- C. Menstruation
- D. Fertilization

Correct answer: B

158. Primary sex organ in males is:

- A. Prostate
- B. Testis
- C. Penis

D. Epididymis

Correct answer: B

159. Primary sex organ in females is:

- A. Uterus
- B. Ovary
- C. Cervix
- D. Vagina

Correct answer: B

160. X chromosome carries genes for:

- A. Sex only
- B. Many traits
- C. Y-linked traits
- D. Autosomal traits

Correct answer: B

161. Turner syndrome has chromosome pattern:

- A. XX
- B. XY
- C. XO
- D. XXY

Correct answer: C

162. Klinefelter syndrome is:

- A. XO
- B. XX
- C. XY
- D. XXY

Correct answer: D

163. RNA differs from DNA by:

- A. Sugar
- B. Base
- C. Structure
- D. All of the above

Correct answer: D

164. Transcription occurs in:

- A. Ribosome
- B. Cytoplasm
- C. Nucleus

D. Golgi

Correct answer: C

165. Translation occurs in:

- A. Nucleus
- B. Ribosome
- C. Mitochondria
- D. Lysosome

Correct answer: B

166. Codon is present on:

- A. tRNA
- B. rRNA
- C. mRNA
- D. DNA

Correct answer: C

167. Anticodon is present on:

- A. mRNA
- B. DNA
- C. tRNA
- D. rRNA

Correct answer: C

168. Genetic code is:

- A. Overlapping
- B. Ambiguous
- C. Universal
- D. Continuous

Correct answer: C

169. Phenotype is influenced by:

- A. Genotype only
- B. Environment only
- C. Both genotype and environment
- D. Mutation only

Correct answer: C

170. Mutation means:

- A. Cell division
- B. Gene expression
- C. Sudden genetic change
- D. Reproduction

Correct answer: C

171. Polygenic inheritance shows:

- A. Discrete variation
- B. Continuous variation
- C. Sex linkage
- D. Dominance

Correct answer: B

172. Hemophilia is:

- A. Autosomal disorder
- B. X-linked disorder
- C. Y-linked disorder
- D. Mitochondrial disorder

Correct answer: B

173. Color blindness is:

- A. Autosomal dominant
- B. Autosomal recessive
- C. X-linked recessive
- D. Y-linked

Correct answer: C

174. Chromosomal aberrations affect:

- A. Gene sequence
- B. Chromosome number or structure
- C. RNA synthesis
- D. Protein folding

Correct answer: B

175. Down syndrome is due to:

- A. Monosomy
- B. Trisomy 21
- C. Trisomy 18
- D. XO

Correct answer: B

176. PCR is used for:

- A. Protein synthesis
- B. DNA amplification
- C. Translation
- D. Mutation repair

Correct answer: B

177. Human genome contains approximately:

- A. 3 million base pairs
- B. 30 million base pairs
- C. 3 billion base pairs
- D. 30 billion base pairs

Correct answer: C

178. Genes located on same chromosome are:

- A. Alleles
- B. Linked genes
- C. Independent genes
- D. Epistatic genes

Correct answer: B

179. Crossing over occurs during:

- A. Mitosis
- B. Meiosis I
- C. Meiosis II
- D. Fertilization

Correct answer: B

180. Law of segregation was proposed by:

- A. Darwin
- B. Mendel
- C. Watson
- D. Crick

Correct answer: B

181. Homozygous means:

- A. Same alleles
- B. Different alleles
- C. One allele
- D. No allele

Correct answer: A

182. Heterozygous means:

- A. Same alleles
- B. Different alleles
- C. No alleles
- D. Lethal alleles

Correct answer: B

183. Dominant allele is represented by:

- A. Small letter
- B. Capital letter
- C. Number
- D. Symbol

Correct answer: B

184. Recessive allele is represented by:

- A. Capital letter
- B. Small letter
- C. Roman numeral
- D. Greek symbol

Correct answer: B

185. Monohybrid cross involves:

- A. One trait
- B. Two traits
- C. Three traits
- D. Many traits

Correct answer: A

186. Dihybrid ratio is:

- A. 3:1
- B. 1:2:1
- C. 9:3:3:1
- D. 1:1

Correct answer: C

187. Genotype ratio of monohybrid cross is:

- A. 3:1
- B. 1:2:1
- C. 9:3:3:1
- D. 1:1

Correct answer: B

188. Phenotype ratio of monohybrid cross is:

- A. 1:2:1
- B. 2:1
- C. 3:1
- D. 9:3:3:1

Correct answer: C

189. Alleles occupy same position on:

- A. Chromosome
- B. Homologous chromosomes
- C. Sister chromatids
- D. DNA strand

Correct answer: B

190. Genetic material in humans is:

- A. RNA
- B. DNA
- C. Protein
- D. Lipid

Correct answer: B

191. Transcription enzyme is:

- A. DNA polymerase
- B. RNA polymerase
- C. Ligase
- D. Helicase

Correct answer: B

192. Translation starts at codon:

- A. UAA
- B. UAG
- C. AUG
- D. UGA

Correct answer: C

193. Stop codons include:

- A. AUG
- B. UAA
- C. UGG
- D. AAA

Correct answer: B

194. Genetic disorders may be:

- A. Single gene
- B. Chromosomal
- C. Multifactorial
- D. All of the above

Correct answer: D

195. Human sex is determined by:

- A. Mother

- B. Father
- C. Both parents equally
- D. Environment

Correct answer: B

196. Y chromosome carries gene for:

- A. Intelligence
- B. Fertility
- C. Maleness
- D. Height

Correct answer: C

197. Barr body is found in:

- A. Male
- B. Female
- C. Both
- D. Neither

Correct answer: B

198. Number of Barr bodies equals:

- A. X chromosomes – 1
- B. Y chromosomes – 1
- C. Total chromosomes
- D. Autosomes

Correct answer: A

199. DNA double helix was proposed by:

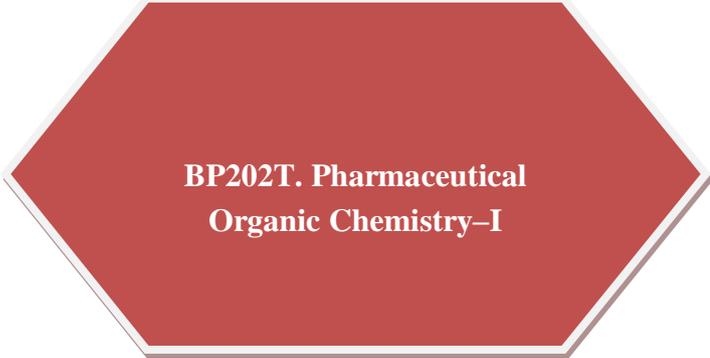
- A. Mendel
- B. Darwin
- C. Watson and Crick
- D. Franklin

Correct answer: C

200. Genetics is the study of:

- A. Cells
- B. Tissues
- C. Heredity and variation
- D. Evolution

Correct answer: C



**BP202T. Pharmaceutical
Organic Chemistry-I**

1. Organic compounds are primarily compounds of:

- A. Nitrogen
- B. Oxygen
- C. Carbon
- D. Sulphur

Correct answer: C

2. Saturated hydrocarbons belong to the class of:

- A. Alkenes
- B. Alkynes
- C. Alkanes
- D. Aromatics

Correct answer: C

3. Unsaturated hydrocarbons contain:

- A. Only single bonds
- B. Double or triple bonds
- C. Only aromatic rings
- D. No carbon

Correct answer: B

4. Compounds having same molecular formula but different structure show:

- A. Metamerism
- B. Isomerism
- C. Polymerism
- D. Tautomerism

Correct answer: B

5. Structural isomerism includes:

- A. Geometrical isomerism
- B. Optical isomerism
- C. Chain isomerism
- D. Conformational isomerism

Correct answer: C

6. IUPAC nomenclature is based on:

- A. Trivial names
- B. Greek system
- C. International rules
- D. Local usage

Correct answer: C

7. Longest carbon chain determines:

- A. Suffix
- B. Prefix
- C. Parent name
- D. Functional group

Correct answer: C

8. Numbering of carbon chain is done to give lowest number to:

- A. Alkyl group
- B. Functional group
- C. Methyl group
- D. Hydrogen

Correct answer: B

9. Functional group is indicated by:

- A. Prefix
- B. Suffix
- C. Infix
- D. Hyphen

Correct answer: B

10. Position isomers differ in:

- A. Carbon skeleton
- B. Position of functional group
- C. Molecular formula
- D. Optical activity

Correct answer: B

11. Chain isomerism arises due to:

- A. Branching of carbon chain
- B. Different functional groups
- C. Different molecular formula
- D. Different geometry

Correct answer: A

12. Metamerism is due to:

- A. Different alkyl groups on either side of functional group
- B. Branching
- C. Double bond position
- D. Chirality

Correct answer: A

13. Functional isomers have:

- A. Same functional group
- B. Different functional groups
- C. Same structure
- D. Same geometry

Correct answer: B

14. Aliphatic compounds are:

- A. Cyclic aromatic
- B. Open chain
- C. Heterocyclic
- D. Aromatic

Correct answer: B

15. Alicyclic compounds are:

- A. Aromatic
- B. Open chain
- C. Cyclic but non-aromatic
- D. Heterocyclic

Correct answer: C

16. Carbocyclic compounds contain:

- A. Only carbon in ring
- B. Nitrogen
- C. Oxygen
- D. Sulphur

Correct answer: A

17. Homologous series members differ by:

- A. CH_3
- B. CH_2
- C. C_2H_4
- D. H_2

Correct answer: B

18. Molecular formula of pentane is:

- A. C_5H_{10}
- B. C_5H_{12}
- C. C_5H_8
- D. C_5H_6

Correct answer: B

19. Number of structural isomers of butane is:

- A. 1
- B. 2
- C. 3
- D. 4

Correct answer: B

20. IUPAC name of isobutane is:

- A. 2-methylpropane
- B. Propylmethane
- C. Neobutane
- D. Dimethylethane

Correct answer: A

21. Which of the following is a functional group isomer of ethanol?

- A. Methoxy methane
- B. Propanal
- C. Ethanoic acid
- D. Ethene

Correct answer: A

22. The IUPAC name of isobutane is:

- A. 2-Methylpropane
- B. 1-Methylpropane
- C. Neopentane
- D. Propane

Correct answer: A

23. Which compound shows chain isomerism?

- A. Ethane
- B. Propane
- C. Butane
- D. Methane

Correct answer: C

24. Position isomerism is exhibited by:

- A. Pentane
- B. 1-Butanol and 2-Butanol

- C. Ethanol and dimethyl ether
D. Propene

Correct answer: B

25. The molecular formula C_4H_{10} has how many structural isomers?

- A. One
B. Two
C. Three
D. Four

Correct answer: B

26. Which type of isomerism is shown by ethanol and dimethyl ether?

- A. Chain
B. Position
C. Functional
D. Tautomerism

Correct answer: C

27. The longest carbon chain rule in IUPAC nomenclature helps in determining:

- A. Prefix
B. Suffix
C. Parent chain
D. Functional group

Correct answer: C

28. Which compound exhibits metamerism?

- A. Ethanol
B. Diethyl ether
C. Butane
D. Ethene

Correct answer: B

29. Which of the following is a homologous series?

- A. Alcohols
B. Alkanes and alkenes
C. Ketones and aldehydes
D. Alcohols and acids

Correct answer: A

30. The general formula of alkanes is:

- A. C_nH_{2n}
B. C_nH_{2n+2}
C. C_nH_{2n-2}
D. C_nH_n

Correct answer: B

31. Which is the correct IUPAC name of $CH_3-CH(CH_3)-CH_2-CH_3$?

- A. Pentane
B. 2-Methylbutane
C. 3-Methylbutane
D. Isopentane

Correct answer: B

32. Which rule gives lowest locant to functional group?

- A. Alphabetical rule
B. Longest chain rule
C. Lowest sum rule
D. Priority rule

Correct answer: D

33. Which of the following does NOT show structural isomerism?

- A. C_2H_6
B. C_4H_{10}
C. C_5H_{12}
D. C_6H_{14}

Correct answer: A

34. Which functional group is indicated by suffix “-ol”?

- A. Aldehyde
- B. Ketone
- C. Alcohol
- D. Acid

Correct answer: C

35. Which compound shows both chain and position isomerism?

- A. Butane
- B. Pentane
- C. Butene
- D. Ethane

Correct answer: C

36. The IUPAC name of neopentane is:

- A. 2,2-Dimethylpropane
- B. 2-Methylbutane
- C. Pentane
- D. Isopentane

Correct answer: A

37. Which type of isomerism arises due to different alkyl groups on either side of a functional group?

- A. Chain
- B. Position
- C. Functional
- D. Metamerism

Correct answer: D

38. The suffix “-ane” indicates:

- A. Unsaturation
- B. Saturated hydrocarbon
- C. Functional group
- D. Aromatic compound

Correct answer: B

39. Which compound has maximum number of isomers?

- A. C_3H_8
- B. C_4H_{10}
- C. C_5H_{12}
- D. C_6H_{14}

Correct answer: D

40. Which is the correct order of increasing number of structural isomers?

- A. $C_4H_{10} < C_5H_{12} < C_6H_{14}$
- B. $C_6H_{14} < C_5H_{12} < C_4H_{10}$
- C. $C_5H_{12} < C_4H_{10} < C_6H_{14}$
- D. $C_4H_{10} < C_6H_{14} < C_5H_{12}$

Correct answer: A

41. General formula of alkanes is:

- A. C_nH_{2n}
- B. C_nH_{2n+2}
- C. C_nH_{2n-2}
- D. C_nH_n

Correct answer: B

42. Carbon atoms in alkanes are:

- A. sp hybridized
- B. sp^2 hybridized
- C. sp^3 hybridized
- D. dsp^2 hybridized

Correct answer: C

43. Bond angle in alkanes is approximately:

- A. 90°
- B. 120°
- C. 180°
- D. 109.5°

Correct answer: D

44. Halogenation of alkanes occurs via:

- A. Ionic mechanism
- B. Free radical mechanism

- C. SN1 mechanism
- D. SN2 mechanism

Correct answer: B

45. Reactivity of halogens in alkane halogenation follows:

- A. $F_2 > Cl_2 > Br_2 > I_2$
- B. $Cl_2 > Br_2 > I_2 > F_2$
- C. $I_2 > Br_2 > Cl_2 > F_2$
- D. $Br_2 > Cl_2 > I_2 > F_2$

Correct answer: A

46. Alkenes are unsaturated due to presence of:

- A. Single bond
- B. Double bond
- C. Triple bond
- D. Aromatic ring

Correct answer: B

47. Hybridization in alkenes is:

- A. sp
- B. sp^2
- C. sp^3
- D. dsp^2

Correct answer: B

48. Stability of alkenes increases with:

- A. Less substitution
- B. More substitution
- C. Less branching
- D. Terminal double bond

Correct answer: B

49. Most stable alkene is:

- A. Ethene
- B. Propene
- C. 2-butene
- D. 1-butene

Correct answer: C

50. Ozonolysis is used to determine:

- A. Molecular weight
- B. Position of double bond

- C. Hybridization
- D. Aromaticity

Correct answer: B

51. Markovnikov's rule applies to:

- A. Free radical addition
- B. Electrophilic addition
- C. Elimination
- D. Substitution

Correct answer: B

52. Anti-Markovnikov addition occurs in presence of:

- A. H_2SO_4
- B. Peroxides
- C. UV light
- D. Water

Correct answer: B

53. E1 reactions are:

- A. Bimolecular
- B. Unimolecular
- C. Free radical
- D. Photochemical

Correct answer: B

54. E2 reactions are:

- A. First order
- B. Second order
- C. Zero order
- D. Chain reactions

Correct answer: B

55. Saytzeff rule favors formation of:

- A. Less substituted alkene
- B. More substituted alkene
- C. Terminal alkene
- D. Cycloalkane

Correct answer: B

56. Carbocation rearrangement occurs in:

- A. E2
- B. SN2

- C. E1
D. Free radical
Correct answer: C

57. Conjugated dienes are stabilized by:

- A. Inductive effect
B. Hyperconjugation
C. Resonance
D. Steric effect

Correct answer: C

58. Diels–Alder reaction is:

- A. [2+2] cycloaddition
B. [4+2] cycloaddition
C. Substitution
D. Elimination

Correct answer: B

59. Allylic rearrangement involves:

- A. Carbocation shift
B. Free radical shift
C. Hydride shift
D. Methyl shift

Correct answer: B

60. Order of stability of carbocations is:

- A. $1^\circ > 2^\circ > 3^\circ$
B. $3^\circ > 2^\circ > 1^\circ$
C. $2^\circ > 1^\circ > 3^\circ$
D. Equal

Correct answer: B

61. Carbon atoms in alkanes are hybridized as:

- A. sp
B. sp^2
C. sp^3
D. dsp^3

Correct answer: C

62. The bond angle in alkanes is approximately:

- A. 90°
B. 109.5°
C. 120°
D. 180°

Correct answer: B

63. Which reaction is characteristic of alkanes?

- A. Addition
B. Substitution
C. Elimination
D. Rearrangement

Correct answer: B

64. Halogenation of alkanes occurs via:

- A. Ionic mechanism
B. Electrophilic addition
C. Free radical mechanism
D. Nucleophilic substitution

Correct answer: C

65. Which halogen is most reactive towards alkanes?

- A. Fluorine
B. Chlorine
C. Bromine
D. Iodine

Correct answer: A

66. Which alkane is used as a fuel gas?

- A. Ethane
B. Propane
C. Methane
D. Butane

Correct answer: C

67. Stability of alkenes increases with:

- A. Increase in molecular weight
- B. Increase in substitution
- C. Presence of halogens
- D. Decrease in carbon atoms

Correct answer: B

68. Carbon atoms in alkenes are hybridized as:

- A. sp
- B. sp²
- C. sp³
- D. dsp²

Correct answer: B

69. Which alkene is most stable?

- A. Ethene
- B. Propene
- C. 2-Butene
- D. 1-Butene

Correct answer: C

70. Elimination reactions generally result in formation of:

- A. Alkanes
- B. Alkenes
- C. Alkynes
- D. Alcohols

Correct answer: B

71. E1 reaction proceeds through formation of:

- A. Free radical
- B. Carbocation
- C. Carbanion
- D. Carbine

Correct answer: B

72. E2 reaction is:

- A. Unimolecular
- B. Bimolecular
- C. Zero order
- D. Free radical

Correct answer: B

73. Order of reactivity of alkyl halides in E1 reaction is:

- A. 1° > 2° > 3°
- B. 2° > 1° > 3°
- C. 3° > 2° > 1°
- D. Methyl > 1° > 2°

Correct answer: C

74. Saytzeff's rule predicts formation of:

- A. Least substituted alkene
- B. Most substituted alkene
- C. Terminal alkene
- D. Symmetrical alkene

Correct answer: B

75. Carbocation rearrangement occurs mainly in:

- A. SN2 reaction
- B. E2 reaction
- C. E1 reaction
- D. Free radical reaction

Correct answer: C

76. Ozonolysis of alkenes results in formation of:

- A. Alcohols
- B. Aldehydes and ketones
- C. Acids
- D. Alkanes

Correct answer: B

77. Addition of HBr to alkene in presence of peroxide follows:

- A. Markownikoff's rule
- B. Anti-Markownikoff's rule
- C. Saytzeff's rule
- D. Zaitsev's rule

Correct answer: B

78. Markownikoff's rule applies to:

- A. Free radical addition
- B. Electrophilic addition
- C. Nucleophilic substitution
- D. Elimination

Correct answer: B

79. Which intermediate is formed in electrophilic addition to alkenes?

- A. Free radical
- B. Carbocation
- C. Carbanion
- D. Carbene

Correct answer: B

80. Conjugated dienes are stabilized due to:

- A. Hyperconjugation
- B. Inductive effect
- C. Resonance
- D. Steric hindrance

Correct answer: C

81. Diels–Alder reaction is an example of:

- A. Substitution
- B. Elimination
- C. Cycloaddition
- D. Rearrangement

Correct answer: C

82. Diels–Alder reaction occurs between:

- A. Two alkenes
- B. Alkene and alkyne
- C. Diene and dienophile
- D. Alkane and alkene

Correct answer: C

83. Which diene readily undergoes Diels–Alder reaction?

- A. Isolated diene
- B. Conjugated diene
- C. Cumulated diene
- D. Saturated diene

Correct answer: B

84. Allylic rearrangement occurs due to:

- A. Migration of double bond
- B. Ring formation
- C. Bond cleavage
- D. Polymerization

Correct answer: A

85. Free radical addition reactions are favored in presence of:

- A. Acid
- B. Base
- C. Light or peroxide
- D. Catalyst

Correct answer: C

86. Which alkene gives maximum heat of hydrogenation?

- A. Most substituted alkene
- B. Least substituted alkene
- C. Internal alkene
- D. Trans alkene

Correct answer: B

87. Which alkene shows geometrical isomerism?

- A. Ethene
- B. Propene
- C. 2-Butene
- D. 1-Butene

Correct answer: C

88. Stability of conjugated dienes is explained by:

- A. Inductive effect
- B. Hyperconjugation
- C. Resonance delocalization
- D. Steric effect

Correct answer: C

89. Which reaction proves structure of alkenes?

- A. Wurtz reaction
- B. Ozonolysis
- C. Cannizzaro reaction
- D. Friedel-Crafts reaction

Correct answer: B

90. Anti-Markownikoff addition is also known as:

- A. Ionic addition
- B. Nucleophilic addition
- C. Peroxide effect
- D. Electrophilic substitution

Correct answer: C

91. General formula of alkyl halides is:

- A. R-OH
- B. R-X
- C. R-COOH
- D. R-NH₂

Correct answer: B

92. SN1 reaction follows:

- A. First order kinetics

- B. Second order kinetics
- C. Zero order
- D. Chain reaction

Correct answer: A

93. SN2 reaction involves:

- A. Carbocation intermediate
- B. Backside attack
- C. Rearrangement
- D. Racemization

Correct answer: B

94. SN2 reaction shows:

- A. Retention
- B. Racemization
- C. Inversion
- D. Rearrangement

Correct answer: C

95. SN1 reaction leads to:

- A. Inversion only
- B. Retention only
- C. Racemization
- D. No stereochemical change

Correct answer: C

96. Reactivity of alkyl halides in SN1 is:

- A. $1^\circ > 2^\circ > 3^\circ$
- B. $3^\circ > 2^\circ > 1^\circ$
- C. Equal
- D. $2^\circ > 3^\circ > 1^\circ$

Correct answer: B

97. Iodoform test is given by:

- A. Ethanol
- B. Methanol
- C. Acetone
- D. Both A and C

Correct answer: D

98. Chloroform is used as:

- A. Antiseptic
- B. Solvent
- C. Anesthetic

D. Sweetener

Correct answer: C

99. Alcohols contain functional group:

A. $-\text{COOH}$

B. $-\text{OH}$

C. $-\text{CHO}$

D. $-\text{NH}_2$

Correct answer: B

100. Ethyl alcohol is also known as:

A. Methanol

B. Ethanol

C. Propanol

D. Butanol

Correct answer: B

101. Which type of hybridization is present in the carbon atoms of alkanes?

A. sp

B. sp^2

C. sp^3

D. dsp^2

Correct answer: C

102. The geometry of carbon atoms in alkanes is:

A. Linear

B. Trigonal planar

C. Tetrahedral

D. Octahedral

Correct answer: C

103. Free radical halogenation of alkanes mainly occurs under:

A. Acidic conditions

B. Basic conditions

C. UV light or heat

D. Presence of water

Correct answer: C

104. Which halogen is most selective in alkane halogenation?

A. Fluorine

B. Chlorine

C. Bromine

D. Iodine

Correct answer: C

105. The major product formed during chlorination of propane is:

A. 1-Chloropropane

B. 2-Chloropropane

C. Propyl chloride only

D. Equal mixture of both

Correct answer: B

106. Which alkene is the most stable?

A. Ethene

B. Propene

C. 1-Butene

D. 2-Methylpropene

Correct answer: D

107. Stability of alkenes increases with:

A. Number of double bonds

B. Degree of substitution

C. Molecular weight only

D. Presence of halogen

Correct answer: B

108. Hybridization of carbon atoms in alkenes is:

A. sp

B. sp^2

C. sp^3

D. dsp^3

Correct answer: B

109. Ozonolysis of alkenes is used to determine:

A. Molecular weight

B. Position of double bond

C. Optical activity

D. Functional group acidity

Correct answer: B

110. Markovnikov's rule applies to:

- A. Free radical addition
- B. Electrophilic addition
- C. Nucleophilic substitution
- D. Elimination reactions

Correct answer: B

111. Anti-Markovnikov addition occurs in presence of:

- A. H_2SO_4
- B. HCl
- C. Organic peroxides
- D. Lewis acids

Correct answer: C

112. Which reagent gives anti-Markovnikov addition to alkenes?

- A. HBr + peroxide
- B. HCl + peroxide
- C. H_2SO_4
- D. Br_2 water

Correct answer: A

113. The intermediate formed in electrophilic addition of alkenes is:

- A. Free radical
- B. Carbocation
- C. Carbanion
- D. Nitrene

Correct answer: B

114. Which alkyl halide reacts fastest in SN_1 reaction?

- A. Methyl chloride
- B. Primary alkyl chloride
- C. Secondary alkyl chloride
- D. Tertiary alkyl chloride

Correct answer: D

115. SN_2 reactions are favored by:

- A. Tertiary alkyl halides
- B. Polar protic solvents
- C. Polar aprotic solvents

D. Weak nucleophiles

Correct answer: C

116. Which reaction shows Walden inversion?

- A. SN_1
- B. SN_2
- C. E1
- D. Free radical substitution

Correct answer: B

117. Carbocation rearrangement is observed in:

- A. SN_2 reactions
- B. SN_1 reactions
- C. Free radical reactions
- D. Addition reactions

Correct answer: B

118. The rate of SN_1 reaction depends on:

- A. Concentration of nucleophile
- B. Concentration of substrate
- C. Both substrate and nucleophile
- D. Temperature only

Correct answer: B

119. The rate of SN_2 reaction depends on:

- A. Substrate only
- B. Nucleophile only
- C. Both substrate and nucleophile
- D. Solvent only

Correct answer: C

120. Which compound gives iodoform test?

- A. Methanol
- B. Ethanol
- C. Acetone
- D. Both B and C

Correct answer: D

121. Chloroform is prepared in the laboratory by:

- A. Wurtz reaction
- B. Haloform reaction
- C. Sandmeyer reaction
- D. Grignard reaction

Correct answer: B

122. Which alcohol is trihydric?

- A. Ethanol
- B. Propylene glycol
- C. Glycerol
- D. Benzyl alcohol

Correct answer: C

123. Lucas test is used to distinguish:

- A. Aldehydes and ketones
- B. Phenols and alcohols
- C. Primary, secondary and tertiary alcohols
- D. Acids and esters

Correct answer: C

124. Which alcohol reacts fastest with Lucas reagent?

- A. Primary
- B. Secondary
- C. Tertiary
- D. Polyhydric

Correct answer: C

125. Oxidation of primary alcohol gives:

- A. Ketone only
- B. Aldehyde only
- C. Carboxylic acid
- D. Aldehyde and carboxylic acid

Correct answer: D

126. Benzyl alcohol on oxidation forms:

- A. Benzene
- B. Benzaldehyde
- C. Benzoic acid directly
- D. Toluene

Correct answer: B

127. Which compound is used as a preservative?

- A. Ethanol
- B. Formaldehyde
- C. Acetone
- D. Methanol

Correct answer: B

128. Chlorobutanol is mainly used as:

- A. Antiseptic
- B. Sedative and preservative
- C. Analgesic
- D. Antipyretic

Correct answer: B

129. Glycerol is chemically classified as:

- A. Monohydric alcohol
- B. Dihydric alcohol
- C. Trihydric alcohol
- D. Aromatic alcohol

Correct answer: C

130. Propylene glycol is widely used as:

- A. Explosive
- B. Antifreeze and solvent
- C. Anesthetic
- D. Pesticide

Correct answer: B

131. Carbonyl group is:

- A. $C=C$
- B. $C\equiv C$
- C. $C=O$
- D. $C-O$

Correct answer: C

132. Aldehydes contain:

- A. $-CO-$
- B. $-CHO$
- C. $-COOH$
- D. $-OH$

Correct answer: B

133. Ketones contain:

- A. Terminal carbonyl
- B. Internal carbonyl
- C. Acid group
- D. Ester group

Correct answer: B

134. Aldol condensation occurs in presence of:

- A. Acid
- B. Base
- C. Heat only
- D. Light

Correct answer: B

135. Cannizzaro reaction occurs in aldehydes having:

- A. α -hydrogen
- B. No α -hydrogen
- C. Double bond
- D. Aromatic ring

Correct answer: B

136. Tollens' test gives:

- A. Red precipitate
- B. Silver mirror
- C. Blue color
- D. Green color

Correct answer: B

137. Fehling's solution is reduced by:

- A. Ketones
- B. Aldehydes
- C. Alcohols
- D. Acids

Correct answer: B

138. Which is the most stable carbocation?

- A. Methyl carbocation
- B. Primary carbocation
- C. Secondary carbocation
- D. Tertiary carbocation

Correct answer: D

139. SN1 reaction proceeds through formation of:

- A. Free radical
- B. Carbanion
- C. Carbocation
- D. Carbenium ion pair

Correct answer: C

140. Which factor does NOT favor SN1 reaction?

- A. Polar protic solvent
- B. Tertiary alkyl halide
- C. Strong nucleophile
- D. Stable carbocation

Correct answer: C

141. SN2 reactions are characterized by:

- A. Two-step mechanism
- B. Carbocation intermediate
- C. Inversion of configuration
- D. Rearrangement

Correct answer: C

142. Order of SN2 reactivity of alkyl halides is:

- A. $3^\circ > 2^\circ > 1^\circ$
- B. $1^\circ > 2^\circ > 3^\circ$
- C. $2^\circ > 1^\circ > 3^\circ$
- D. $3^\circ > 1^\circ > 2^\circ$

Correct answer: B

143. Which solvent favors SN2 reaction?

- A. Water
- B. Alcohol
- C. Acetone
- D. Methanol

Correct answer: C

144. Iodoform gives positive test due to presence of:

- A. $-\text{CHO}$ group
- B. $-\text{COCH}_3$ group
- C. $-\text{COOH}$ group

D. -OH group

Correct answer: B

145. Chloroform on exposure to air and light forms:

- A. COCl_2
- B. HCl
- C. CH_2Cl_2
- D. CCl_4

Correct answer: A

146. Which compound is used as a solvent in anesthesia?

- A. Carbon tetrachloride
- B. Chloroform
- C. Dichloromethane
- D. Tetrachloroethylene

Correct answer: B

147. Lucas test is used to distinguish:

- A. Aldehydes and ketones
- B. Primary, secondary and tertiary alcohols
- C. Phenols and alcohols
- D. Aliphatic and aromatic alcohols

Correct answer: B

148. Which alcohol gives immediate turbidity with Lucas reagent?

- A. Methanol
- B. Ethanol
- C. Isopropyl alcohol
- D. tert-Butyl alcohol

Correct answer: D

149. Glycerol is chemically classified as:

- A. Monohydric alcohol
- B. Dihydric alcohol
- C. Trihydric alcohol
- D. Phenolic alcohol

Correct answer: C

150. Chlorobutanol is mainly used as:

- A. Analgesic

B. Preservative

C. Antipyretic

D. Antiseptic

Correct answer: B

151. Aldol condensation occurs in compounds having:

- A. -CHO group only
- B. -COOH group
- C. α -hydrogen
- D. Aromatic ring

Correct answer: C

152. Cannizzaro reaction is shown by aldehydes which:

- A. Contain α -hydrogen
- B. Do not contain α -hydrogen
- C. Are aromatic
- D. Are aliphatic

Correct answer: B

153. Benzaldehyde undergoes:

- A. Aldol condensation
- B. Cannizzaro reaction
- C. Perkin condensation only
- D. Haloform reaction

Correct answer: B

154. Benzoin condensation requires presence of:

- A. Acid
- B. Base
- C. Cyanide ion
- D. Grignard reagent

Correct answer: C

155. Formaldehyde reacts with ammonia to form:

- A. Urotropine
- B. Paraldehyde
- C. Methanol
- D. Acetaldehyde

Correct answer: A

156. Vanillin is chemically classified as:

- A. Ketone
- B. Aldehyde
- C. Alcohol
- D. Acid

Correct answer: B

157. Acidity of carboxylic acids is mainly due to:

- A. Resonance stabilization of conjugate base
- B. Hydrogen bonding
- C. Molecular weight
- D. Presence of hydroxyl group

Correct answer: A

158. Electron withdrawing substituents on carboxylic acids:

- A. Decrease acidity
- B. Increase acidity
- C. Do not affect acidity
- D. Destroy acidity

Correct answer: B

159. Which acid is used as an anticoagulant?

- A. Citric acid
- B. Oxalic acid
- C. Benzoic acid
- D. Salicylic acid

Correct answer: A

160. Aspirin is chemically known as:

- A. Acetyl salicylic acid
- B. Salicylic acid
- C. Benzoic acid
- D. Acetic acid

Correct answer: A

161. Which compound is used as an insect repellent?

- A. Benzyl benzoate
- B. Dimethyl phthalate
- C. Methyl salicylate

D. Benzoic acid

Correct answer: B

162. Carboxylic acids can be identified by reaction with:

- A. Sodium bicarbonate
- B. Ferric chloride
- C. Tollens reagent
- D. Fehling solution

Correct answer: A

163. Basicity of aliphatic amines is due to:

- A. Lone pair on nitrogen
- B. Alkyl group
- C. Hydrogen bonding
- D. Molecular weight

Correct answer: A

164. Which amine is a CNS stimulant?

- A. Ethanolamine
- B. Ethylenediamine
- C. Amphetamine
- D. Aniline

Correct answer: C

165. Basic strength of amines in aqueous solution is affected mainly by:

- A. Inductive effect and solvation
- B. Molecular weight
- C. Boiling point
- D. Melting point

Correct answer: A

166. Functional group of carboxylic acids is:

- A. $-\text{CHO}$
- B. $-\text{CO}-$
- C. $-\text{COOH}$
- D. $-\text{OH}$

Correct answer: C

167. Carboxylic acids are acidic due to:

- A. Inductive effect

- B. Resonance
- C. Both A and B
- D. Hydrogen bonding

Correct answer: C

168. Electron withdrawing groups:

- A. Decrease acidity
- B. Increase acidity
- C. No effect
- D. Make basic

Correct answer: B

169. Sodium bicarbonate test is positive for:

- A. Alcohol
- B. Aldehyde
- C. Carboxylic acid
- D. Ketone

Correct answer: C

170. Esterification occurs between:

- A. Alcohol + acid
- B. Aldehyde + alcohol
- C. Ketone + acid
- D. Amine + acid

Correct answer: A

171. Amines are basic due to:

- A. π electrons
- B. Lone pair on nitrogen
- C. Inductive withdrawal
- D. Resonance

Correct answer: B

172. Basicity of amines increases with:

- A. Electron withdrawing groups
- B. Electron donating groups
- C. Aromaticity
- D. Hydrogen bonding

Correct answer: B

173. Hinsberg test distinguishes:

- A. Alcohols
- B. Amines

- C. Acids
- D. Aldehydes

Correct answer: B

174. Ethanolamine contains:

- A. Only $-\text{OH}$
- B. Only $-\text{NH}_2$
- C. Both $-\text{OH}$ and $-\text{NH}_2$
- D. $-\text{COOH}$

Correct answer: C

175. Amphetamine is:

- A. Analgesic
- B. CNS stimulant
- C. Antibiotic
- D. Antiseptic

Correct answer: B

176. Acetyl salicylic acid is:

- A. Paracetamol
- B. Aspirin
- C. Ibuprofen
- D. Phenacetyl

Correct answer: B

177. Salicylic acid contains:

- A. Only $-\text{COOH}$
- B. Only $-\text{OH}$
- C. $-\text{COOH}$ and $-\text{OH}$
- D. $-\text{NH}_2$

Correct answer: C

178. Citric acid is:

- A. Monobasic
- B. Dibasic
- C. Tribasic
- D. Tetrabasic

Correct answer: C

179. Benzoic acid is:

- A. Aliphatic
- B. Aromatic
- C. Alicyclic

D. Heterocyclic

Correct answer: B

180. Dimethyl phthalate is used as:

A. Plasticizer

B. Analgesic

C. Antibiotic

D. Sweetener

Correct answer: A

181. Oxalic acid is:

A. Monocarboxylic

B. Dicarboxylic

C. Tricarboxylic

D. Aromatic

Correct answer: B

182. Succinic acid contains:

A. One COOH

B. Two COOH

C. Three COOH

D. Four COOH

Correct answer: B

183. Methyl salicylate is known as:

A. Oil of wintergreen

B. Aspirin

C. Phenol

D. Benzaldehyde

Correct answer: A

184. Benzyl benzoate is used in:

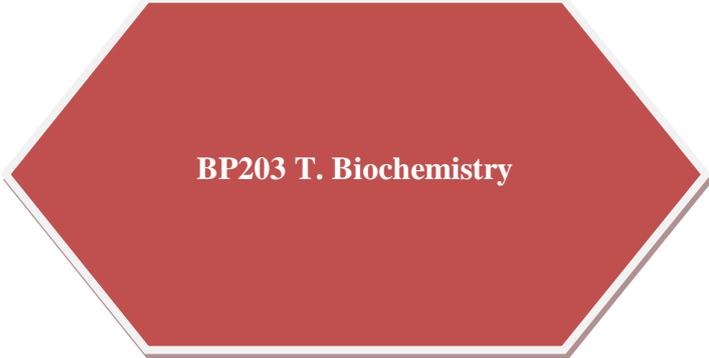
A. Analgesic

B. Scabies treatment

C. Antibiotic

D. Antipyretic

Correct answer: B



BP203 T. Biochemistry

- 1. Biomolecules are compounds essential for:**
 - A. Environment
 - B. Life processes
 - C. Industrial use
 - D. Pollution control

Correct answer: B
- 2. Carbohydrates are chemically:**
 - A. Polyhydroxy ketones or aldehydes
 - B. Amino acids
 - C. Fatty acids
 - D. Steroids

Correct answer: A
- 3. General formula of carbohydrates is:**
 - A. C_nH_{2n}
 - B. $C_n(H_2O)_n$
 - C. C_nH_{2n+2}
 - D. C_nH_n

Correct answer: B
- 4. Main biological role of carbohydrates is:**
 - A. Structural
 - B. Catalytic
 - C. Energy source
 - D. Hormonal

Correct answer: C
- 5. Lipids are characterized by:**
 - A. Water solubility
 - B. Insolubility in organic solvents
 - C. Solubility in organic solvents
 - D. Polymer nature

Correct answer: C
- 6. Essential fatty acids include:**
 - A. Palmitic acid
 - B. Stearic acid
 - C. Linoleic acid
 - D. Oleic acid

Correct answer: C
- 7. Amino acids contain which functional groups?**
 - A. $-COOH$ and $-NH_2$
 - B. $-CHO$ and $-OH$
 - C. $-COOH$ and $-SH$
 - D. $-NH_2$ only

Correct answer: A
- 8. Proteins are polymers of:**
 - A. Fatty acids
 - B. Amino acids
 - C. Nucleotides
 - D. Sugars

Correct answer: B
- 9. Peptide bond is formed between:**
 - A. Two amino groups
 - B. Two carboxyl groups
 - C. Amino and carboxyl group
 - D. Side chains

Correct answer: C
- 10. Nucleic acids are composed of:**
 - A. Amino acids
 - B. Nucleotides
 - C. Fatty acids
 - D. Sugars only

Correct answer: B
- 11. DNA sugar is:**
 - A. Ribose
 - B. Deoxyribose
 - C. Glucose
 - D. Fructose

Correct answer: B
- 12. RNA contains base:**
 - A. Thymine
 - B. Cytosine
 - C. Uracil
 - D. Adenine

Correct answer: C
- 13. Free energy is denoted by:**
 - A. H
 - B. S
 - C. G
 - D. E

Correct answer: C
- 14. Exergonic reactions:**
 - A. Require energy
 - B. Release energy
 - C. Are non-spontaneous

D. Have positive ΔG

Correct answer: B

15. Endergonic reactions:

- A. Release energy
- B. Have negative ΔG
- C. Require energy
- D. Occur spontaneously

Correct answer: C

16. Relationship between free energy

is:

- A. $\Delta G = \Delta H + T\Delta S$
- B. $\Delta G = \Delta H - T\Delta S$
- C. $\Delta H = \Delta G - T\Delta S$
- D. $\Delta S = \Delta G - \Delta H$

Correct answer: B

17. Oxidation means:

- A. Gain of electrons
- B. Loss of electrons
- C. Gain of protons
- D. Loss of neutrons

Correct answer: B

18. Redox potential indicates:

- A. Energy content
- B. Oxidation tendency
- C. Reduction tendency
- D. pH

Correct answer: C

19. ATP is classified as:

- A. Lipid
- B. Energy rich compound
- C. Enzyme
- D. Vitamin

Correct answer: B

20. Energy released from ATP

hydrolysis is approx:

- A. 3 kcal/mol
- B. 7.3 kcal/mol
- C. 15 kcal/mol
- D. 30 kcal/mol

Correct answer: B

21. cAMP acts as:

- A. First messenger
- B. Second messenger
- C. Hormone

D. Enzyme

Correct answer: B

22. ATP contains how many high-energy bonds?

- A. One
- B. Two
- C. Three
- D. Four

Correct answer: B

23. Biological role of ATP is:

- A. Storage of DNA
- B. Structural protein
- C. Energy transfer
- D. Hormone synthesis

Correct answer: C

24. cAMP is synthesized from:

- A. ADP
- B. ATP
- C. AMP
- D. GTP

Correct answer: B

25. Lipids mainly store energy in form of:

- A. Glycogen
- B. Triglycerides
- C. Phospholipids
- D. Steroids

Correct answer: B

26. Structural proteins include:

- A. Insulin
- B. Hemoglobin
- C. Collagen
- D. Enzymes

Correct answer: C

27. Enzymes are:

- A. Lipids
- B. Proteins
- C. Carbohydrates
- D. Nucleic acids

Correct answer: B

28. Primary structure of protein refers to:

- A. α -helix
- B. Folding

- C. Amino acid sequence
- D. Quaternary association

Correct answer: C

29. Secondary structure is stabilized

by:

- A. Ionic bonds
- B. Hydrogen bonds
- C. Disulfide bonds
- D. Peptide bonds

Correct answer: B

30. Denaturation affects:

- A. Primary structure
- B. Secondary structure
- C. Tertiary structure
- D. Both B and C

Correct answer: D

31. Nucleotides consist of:

- A. Sugar + base
- B. Base + phosphate
- C. Sugar + base + phosphate
- D. Sugar only

Correct answer: C

32. Phosphodiester bond links:

- A. Amino acids
- B. Fatty acids
- C. Nucleotides
- D. Sugars

Correct answer: C

33. Biological oxidation involves:

- A. Oxygen only
- B. Hydrogen removal
- C. Carbon removal
- D. Nitrogen removal

Correct answer: B

34. High-energy compounds include:

- A. Glucose
- B. ATP
- C. Lactate
- D. Glycine

Correct answer: B

35. ATP is mainly produced in:

- A. Cytoplasm
- B. Ribosomes
- C. Mitochondria

- D. Nucleus

Correct answer: C

36. Free energy change determines:

- A. Speed of reaction
- B. Direction of reaction
- C. Color of reaction
- D. pH of reaction

Correct answer: B

37. Entropy refers to:

- A. Energy content
- B. Randomness
- C. Heat
- D. Pressure

Correct answer: B

38. Enthalpy represents:

- A. Free energy
- B. Heat content
- C. Randomness
- D. Pressure

Correct answer: B

39. ATP is regenerated from ADP

by:

- A. Hydrolysis
- B. Oxidation
- C. Phosphorylation
- D. Reduction

Correct answer: C

40. cAMP is degraded by:

- A. Adenyl cyclase
- B. Phosphodiesterase
- C. Kinase
- D. Isomerase

Correct answer: B

41. Glycolysis occurs in:

- A. Mitochondria
- B. Cytoplasm
- C. Nucleus
- D. Lysosome

Correct answer: B

42. End product of glycolysis under aerobic conditions is:

- A. Lactate
- B. Pyruvate
- C. Acetyl CoA

D. Ethanol

Correct answer: B

43. Net ATP gain in glycolysis is:

A. 1

B. 2

C. 4

D. 6

Correct answer: B

44. Key regulatory enzyme of glycolysis is:

A. Hexokinase

B. Phosphofruktokinase

C. Pyruvate kinase

D. Enolase

Correct answer: B

45. Citric acid cycle occurs in:

A. Cytosol

B. Nucleus

C. Mitochondrial matrix

D. Inner membrane

Correct answer: C

46. First compound formed in TCA cycle is:

A. Citrate

B. Oxaloacetate

C. Succinate

D. Malate

Correct answer: A

47. Total ATP produced per acetyl CoA in TCA cycle is:

A. 10

B. 12

C. 15

D. 18

Correct answer: B

48. HMP shunt mainly produces:

A. ATP

B. NADH

C. NADPH

D. FADH₂

Correct answer: C

49. G6PD deficiency leads to:

A. Hemolytic anemia

B. Diabetes

C. Obesity

D. Gout

Correct answer: A

50. Glycogen is stored mainly in:

A. Kidney

B. Brain

C. Liver and muscle

D. Heart

Correct answer: C

51. Glycogen breakdown is called:

A. Glycolysis

B. Glycogenesis

C. Glycogenolysis

D. Gluconeogenesis

Correct answer: C

52. Glycogen storage diseases are due to:

A. Hormone excess

B. Enzyme deficiency

C. Vitamin deficiency

D. Fat deficiency

Correct answer: B

53. Gluconeogenesis occurs mainly in:

A. Muscle

B. Brain

C. Liver

D. RBC

Correct answer: C

54. Gluconeogenesis forms glucose from:

A. Fatty acids only

B. Non-carbohydrate sources

C. Glycogen

D. Fructose

Correct answer: B

55. Insulin decreases blood glucose by:

A. Increasing gluconeogenesis

B. Increasing glycogenolysis

C. Increasing glucose uptake

D. Increasing lipolysis

Correct answer: C

56. Glucagon increases blood glucose

by:

- A. Glycogenesis
- B. Glycogenolysis
- C. Glycolysis
- D. Lipogenesis

Correct answer: B

57. Diabetes mellitus is due to:

- A. Excess insulin
- B. Insulin deficiency or resistance
- C. Glucagon deficiency
- D. Cortisol deficiency

Correct answer: B

58. ETC is located in:

- A. Cytoplasm
- B. Outer mitochondrial membrane
- C. Inner mitochondrial membrane
- D. Matrix

Correct answer: C

59. Final electron acceptor in ETC

is:

- A. NAD⁺
- B. FAD
- C. Oxygen
- D. Cytochrome c

Correct answer: C

60. Oxidative phosphorylation couples:

- A. Oxidation and reduction
- B. Electron transfer and ATP synthesis
- C. Glycolysis and TCA
- D. Reduction and hydrolysis

Correct answer: B

61. β -oxidation occurs in:

- A. Cytosol
- B. Mitochondria
- C. Nucleus
- D. ER

Correct answer: B

62. Palmitic acid produces how many acetyl CoA?

- A. 6
- B. 7

C. 8

D. 9

Correct answer: C

63. Ketone bodies are formed in:

- A. Muscle
- B. Kidney
- C. Liver
- D. Brain

Correct answer: C

64. Ketone bodies include:

- A. Acetone
- B. Acetoacetate
- C. β -hydroxybutyrate
- D. All of the above

Correct answer: D

65. Ketoacidosis occurs in:

- A. Hypoglycemia
- B. Starvation
- C. Uncontrolled diabetes
- D. All of the above

Correct answer: D

66. Fatty acid synthesis occurs in:

- A. Mitochondria
- B. Cytosol
- C. Nucleus
- D. Lysosome

Correct answer: B

67. Rate-limiting enzyme of FA synthesis is:

- A. Acetyl CoA carboxylase
- B. Fatty acid synthase
- C. Malate dehydrogenase
- D. Citrate synthase

Correct answer: A

68. Cholesterol is precursor of:

- A. Bile acids
- B. Steroid hormones
- C. Vitamin D
- D. All of the above

Correct answer: D

69. Hypercholesterolemia increases risk of:

- A. Obesity
- B. Diabetes

- C. Atherosclerosis
- D. Fatty liver

Correct answer: C

70. Transamination requires:

- A. Biotin
- B. Folic acid
- C. Pyridoxal phosphate
- D. Thiamine

Correct answer: C

71. Purines include:

- A. Cytosine
- B. Thymine
- C. Adenine
- D. Uracil

Correct answer: C

72. 142. End product of purine metabolism is:

- A. Urea
- B. Uric acid
- C. Creatinine
- D. Ammonia

Correct answer: B

73. Gout is caused by:

- A. Hypouricemia
- B. Hyperuricemia
- C. Hypoglycemia
- D. Hyperglycemia

Correct answer: B

74. DNA replication is:

- A. Conservative
- B. Semi-conservative
- C. Dispersive
- D. Random

Correct answer: B

75. 145. Transcription produces:

- A. DNA
- B. RNA
- C. Protein
- D. Lipid

Correct answer: B

76. Translation occurs on:

- A. Nucleus
- B. Ribosomes
- C. Mitochondria

- D. Golgi

Correct answer: B

77. Enzymes are:

- A. Consumed in reactions
- B. Reusable catalysts
- C. Lipids
- D. Vitamins

Correct answer: B

78. IUB classification is based on:

- A. Source
- B. Structure
- C. Type of reaction
- D. Size

Correct answer: C

79. Km value represents:

- A. Maximum velocity
- B. Substrate concentration at half V_{max}
- C. Enzyme concentration
- D. pH optimum

Correct answer: B

80. Competitive inhibitors increase:

- A. V_{max}
- B. K_m
- C. Both V_{max} and K_m
- D. Neither

Correct answer: B

81. Lineweaver–Burk plot is:

- A. Hyperbolic
- B. Sigmoid
- C. Double reciprocal
- D. Linear plot of v vs s

Correct answer: C

82. Allosteric enzymes show:

- A. Michaelis kinetics
- B. Sigmoid curve
- C. Linear kinetics
- D. First-order kinetics

Correct answer: B

83. Enzyme induction increases:

- A. Enzyme degradation
- B. Enzyme synthesis
- C. Inhibition

D. Denaturation

Correct answer: B

84. Isoenzymes differ in:

A. Function

B. Structure

C. Tissue distribution

D. All of the above

Correct answer: D

85. Diagnostic enzyme for myocardial infarction is:

A. ALT

B. AST

C. CK-MB

D. ALP

Correct answer: C

86. Coenzymes are:

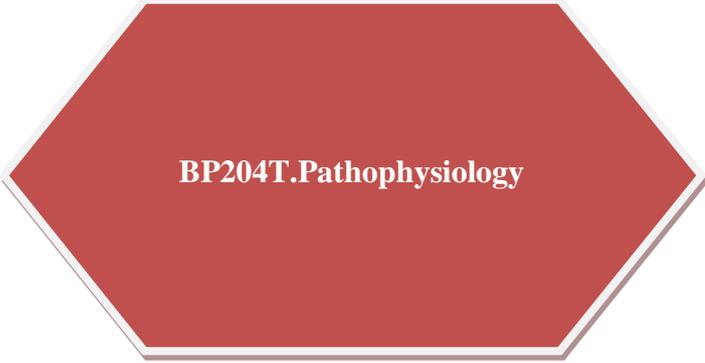
A. Protein part

B. Non-protein organic molecules

C. Inorganic ions

D. Substrates

Correct answer: B



BP204T.Pathophysiology

1. Homeostasis refers to:

- A. Disease state
- B. Constant internal environment
- C. Cell death
- D. Inflammation

Correct Ans: B

2. Feedback mechanisms mainly help in maintaining:

- A. Growth
- B. Homeostasis
- C. Immunity
- D. Reproduction

Correct Ans: B

3. Negative feedback system is characterized by:

- A. Enhancement of stimulus
- B. No response
- C. Opposing the initial change
- D. Cell injury

Correct Ans: C

4. The most common cause of cell injury is:

- A. Infection
- B. Hypoxia
- C. Trauma
- D. Chemicals

Correct Ans: B

5. Hypoxia primarily affects which organelle first?

- A. Nucleus
- B. Ribosome
- C. Mitochondria
- D. Lysosome

Correct Ans: C

6. Cell membrane damage leads to:

- A. DNA synthesis
- B. Enzyme leakage
- C. Protein synthesis

D. Cell repair

Correct Ans: B

7. Mitochondrial damage causes:

- A. ATP depletion
- B. Increased protein synthesis
- C. Cell division
- D. Lysosomal stability

Correct Ans: A

8. Ribosomal damage results in:

- A. Increased lipid synthesis
- B. Decreased protein synthesis
- C. Cell swelling
- D. Necrosis

Correct Ans: B

9. Nuclear damage mainly affects:

- A. Energy production
- B. Protein folding
- C. DNA replication
- D. Cell membrane

Correct Ans: C

10. Atrophy is defined as:

- A. Increase in cell size
- B. Increase in cell number
- C. Decrease in cell size
- D. Change in cell type

Correct Ans: C

11. Hypertrophy involves:

- A. Increase in cell number
- B. Increase in cell size
- C. Decrease in cell size
- D. Cell death

Correct Ans: B

12. Hyperplasia refers to:

- A. Increase in cell size
- B. Increase in cell number
- C. Decrease in function
- D. Cell injury

Correct Ans: B

13. Metaplasia is:

- A. Reversible cell death
- B. Change of one cell type to another
- C. Increase in cell size
- D. Malignant transformation

Correct Ans: B

14. Dysplasia indicates:

- A. Normal growth
- B. Controlled proliferation
- C. Disordered cell growth
- D. Cell adaptation

Correct Ans: C

15. Cell swelling occurs due to:

- A. Protein denaturation
- B. Loss of membrane integrity
- C. Failure of ion pumps
- D. Nuclear damage

Correct Ans: C

16. Intracellular accumulation may occur due to:

- A. Excess intake
- B. Defective metabolism
- C. Transport defects
- D. All of the above

Correct Ans: D

17. Pathological calcification is deposition of:

- A. Sodium
- B. Potassium
- C. Calcium salts
- D. Iron

Correct Ans: C

18. Electrolyte imbalance affects mainly:

- A. Hormones
- B. Enzymes
- C. Cell membrane potential
- D. DNA

Correct Ans: C

19. Acidosis refers to:

- A. Increase in blood pH
- B. Decrease in blood pH
- C. Normal pH
- D. Alkaline state

Correct Ans: B

20. Alkalosis is characterized by:

- A. Low pH
- B. High pH
- C. Cell death
- D. Hypoxia

Correct Ans: B

21. Inflammation is a response to:

- A. Growth
- B. Injury
- C. Nutrition
- D. Metabolism

Correct Ans: B

22. Cardinal signs of inflammation include all EXCEPT:

- A. Redness
- B. Swelling
- C. Pain
- D. Pallor

Correct Ans: D

23. Acute inflammation is characterized by:

- A. Lymphocytes
- B. Macrophages
- C. Neutrophils
- D. Fibroblasts

Correct Ans: C

24. Chronic inflammation involves mainly:

- A. Neutrophils
- B. Lymphocytes
- C. Platelets
- D. RBCs

Correct Ans: B

25. Increased vascular permeability leads to:

- A. Exudate formation
- B. Vasoconstriction
- C. Thrombosis
- D. Fibrosis

Correct Ans: A

26. Migration of WBCs occurs through:

- A. Diapedesis
- B. Phagocytosis
- C. Chemotaxis
- D. Pinocytosis

Correct Ans: A

27. Histamine is released from:

- A. Platelets
- B. Mast cells
- C. Neutrophils
- D. Lymphocytes

Correct Ans: B

28. Prostaglandins are mediators of:

- A. Fever and pain
- B. Clotting
- C. Immunity
- D. Healing

Correct Ans: A

29. Wound healing in skin involves:

- A. Inflammation only
- B. Regeneration only
- C. Repair and regeneration
- D. Necrosis

Correct Ans: C

30. Atherosclerosis is characterized by:

- A. Fat deposition in arteries
- B. Infection
- C. Tumor formation
- D. Calcification of veins

Correct Ans: A

31. Hypertension is defined as:

- A. Low BP
- B. Normal BP
- C. Persistent high BP
- D. Fluctuating BP

Correct Ans: C

32. Congestive heart failure results in:

- A. Reduced cardiac output
- B. Increased BP
- C. Increased heart rate only
- D. Normal circulation

Correct Ans: A

33. Ischemic heart disease occurs due to:

- A. Infection
- B. Reduced blood supply
- C. Hypertension only
- D. Valve defects

Correct Ans: B

34. Angina pectoris is caused by:

- A. Complete blockage
- B. Partial ischemia
- C. Infection
- D. Cardiac rupture

Correct Ans: B

35. Myocardial infarction is:

- A. Reversible ischemia
- B. Necrosis of heart muscle
- C. Inflammation
- D. Hypertrophy

Correct Ans: B

36. Arteriosclerosis refers to:

- A. Softening of arteries
- B. Hardening of arteries
- C. Infection
- D. Inflammation

Correct Ans: B

37. Asthma is characterized by:

- A. Irreversible obstruction

- B. Bronchial inflammation and spasm
- C. Lung collapse
- D. Alveolar destruction

Correct Ans: B

38. COPD includes:

- A. Asthma only
- B. Emphysema and chronic bronchitis
- C. Pneumonia
- D. Tuberculosis

Correct Ans: B

39. Acute renal failure is:

- A. Sudden loss of kidney function
- B. Chronic disease
- C. Congenital defect
- D. Infection only

Correct Ans: A

40. Chronic renal failure leads to:

- A. Complete recovery
- B. Progressive kidney damage
- C. Acute inflammation
- D. Hypertension cure

Correct Ans: B

41. Iron deficiency anemia is due to:

- A. Vitamin deficiency
- B. Iron deficiency
- C. Genetic defect
- D. Infection

Correct Ans: B

42. Megaloblastic anemia is caused by deficiency of:

- A. Iron
- B. Vitamin B12 and folic acid
- C. Calcium
- D. Vitamin C

Correct Ans: B

43. Sickle cell anemia is:

- A. Acquired
- B. Nutritional

- C. Hereditary
- D. Infectious

Correct Ans: C

44. Thalassemia affects:

- A. Platelets
- B. RBC synthesis
- C. WBC count
- D. Plasma proteins

Correct Ans: B

45. Hemophilia is a disorder of:

- A. RBC
- B. WBC
- C. Blood clotting
- D. Plasma volume

Correct Ans: C

46. Diabetes mellitus is characterized by:

- A. Hypoglycemia
- B. Hyperglycemia
- C. Hypotension
- D. Acidosis only

Correct Ans: B

47. Insulin is secreted by:

- A. Liver
- B. Pancreas
- C. Kidney
- D. Adrenal

Correct Ans: B

48. Hyperthyroidism results in:

- A. Weight gain
- B. Weight loss
- C. Bradycardia
- D. Depression

Correct Ans: B

49. Epilepsy is a disorder of:

- A. Muscles
- B. Brain
- C. Heart

D. Kidney

Correct Ans: B

50. Parkinson's disease is due to deficiency of:

- A. Acetylcholine
- B. Dopamine
- C. Serotonin
- D. GABA

Correct Ans: B

51. Stroke occurs due to:

- A. Infection
- B. Interrupted blood supply to brain
- C. Trauma only
- D. Tumor

Correct Ans: B

52. Depression is classified as:

- A. Neurological disorder
- B. Psychiatric disorder
- C. Endocrine disorder
- D. Metabolic disorder

Correct Ans: B

53. Schizophrenia affects:

- A. Memory only
- B. Perception and thinking
- C. Motor function
- D. Vision

Correct Ans: B

54. Alzheimer's disease involves:

- A. Muscle wasting
- B. Progressive memory loss
- C. Seizures
- D. Stroke

Correct Ans: B

55. Peptic ulcer is caused by:

- A. Excess acid
- B. Infection
- C. NSAIDs

D. All of the above

Correct Ans: D

56. Jaundice is due to accumulation of:

- A. Glucose
- B. Bilirubin
- C. Cholesterol
- D. Urea

Correct Ans: B

57. Hepatitis is inflammation of:

- A. Kidney
- B. Liver
- C. Pancreas
- D. Spleen

Correct Ans: B

58. Hepatitis A is transmitted by:

- A. Blood
- B. Sexual contact
- C. Feco-oral route
- D. Air

Correct Ans: C

59. Alcoholic liver disease results from:

- A. Viral infection
- B. Excess alcohol intake
- C. Drug toxicity
- D. Genetic defect

Correct Ans: B

60. Rheumatoid arthritis is:

- A. Degenerative
- B. Autoimmune
- C. Infectious
- D. Metabolic

Correct Ans: B

61. Osteoporosis is characterized by:

- A. Increased bone density
- B. Decreased bone mass
- C. Bone infection
- D. Joint inflammation

Correct Ans: B

62. Gout is caused by accumulation of:

- A. Calcium
- B. Uric acid
- C. Glucose
- D. Sodium

Correct Ans: B

63. Cancer is defined as:

- A. Controlled growth
- B. Uncontrolled cell proliferation
- C. Inflammation
- D. Degeneration

Correct Ans: B

64. Carcinogens are agents that:

- A. Heal cancer
- B. Cause cancer
- C. Prevent cancer
- D. Diagnose cancer

Correct Ans: B

65. Metastasis refers to:

- A. Local growth
- B. Spread of cancer cells
- C. Cell death
- D. Regression

Correct Ans: B

66. Meningitis is inflammation of:

- A. Brain tissue
- B. Meninges
- C. Spinal cord
- D. Nerves

Correct Ans: B

67. Typhoid is caused by:

- A. Virus
- B. Parasite
- C. Bacteria
- D. Fungus

Correct Ans: C

68. Leprosy affects mainly:

- A. Lungs

B. Skin and nerves

- C. Liver
- D. Kidney

Correct Ans: B

69. Tuberculosis is caused by:

- A. Mycobacterium tuberculosis
- B. Staphylococcus
- C. Virus
- D. Parasite

Correct Ans: A

70. TB mainly affects:

- A. Liver
- B. Lungs
- C. Brain
- D. Kidney

Correct Ans: B

71. Urinary tract infections commonly affect:

- A. Lungs
- B. Kidney and bladder
- C. Liver
- D. Heart

Correct Ans: B

72. AIDS is caused by:

- A. Bacteria
- B. Fungus
- C. HIV
- D. Parasite

Correct Ans: C

73. HIV primarily attacks:

- A. RBCs
- B. Platelets
- C. CD4 T cells
- D. Neutrophils

Correct Ans: C

74. Syphilis is caused by:

- A. Virus
- B. Treponema pallidum

C. Fungus

D. Parasite

Correct Ans: B

75. Gonorrhoea is caused by:

A. Neisseria gonorrhoeae

B. Chlamydia

C. HIV

D. HPV

Correct Ans: A

76. Incubation period of typhoid is approximately:

A. 1–2 days

B. 3–5 days

C. 7–14 days

D. 30 days

Correct Ans: C

77. Leprosy is caused by:

A. Mycobacterium tuberculosis

B. Mycobacterium leprae

C. Mycoplasma

D. Staphylococcus

Correct Ans: B

78. The primary route of TB transmission is:

A. Water

B. Food

C. Airborne droplets

D. Skin contact

Correct Ans: C

79. Mantoux test is used for diagnosis of:

A. Typhoid

B. Tuberculosis

C. Leprosy

D. AIDS

Correct Ans: B

80. AIDS stands for:

A. Acquired Immune Deficiency

Syndrome

B. Acute Immune Defect Syndrome

C. Auto Immune Deficiency Syndrome

D. Acquired Infection Deficiency Syndrome

Correct Ans: A

81. Window period in HIV refers to:

A. Time of treatment

B. Time between infection and antibody detection

C. Incubation of virus outside body

D. Time of symptom appearance

Correct Ans: B

82. Syphilis primarily spreads through:

A. Air

B. Water

C. Sexual contact

D. Insects

Correct Ans: C

83. Gonorrhoea commonly affects:

A. Respiratory tract

B. Gastrointestinal tract

C. Genitourinary tract

D. Central nervous system

Correct Ans: C

84. Congenital syphilis is transmitted through:

A. Blood transfusion

B. Placenta

C. Breast milk

D. Air

Correct Ans: B

85. First-line prevention of STDs includes:

A. Antibiotics

B. Vaccination only

C. Safe sexual practices

D. Surgery

Correct Ans: C

86. Edema is caused by:

- A. Reduced capillary pressure
- B. Increased vascular permeability
- C. Decreased fluid retention
- D. Reduced sodium

Correct Ans: B

87. Thrombosis refers to:

- A. Bleeding disorder
- B. Formation of clot within blood vessel
- C. Vessel rupture
- D. Infection

Correct Ans: B

88. Embolism is:

- A. Local clot formation
- B. Migration of clot
- C. Vessel inflammation
- D. Vessel dilation

Correct Ans: B

89. Shock is characterized by:

- A. Increased tissue perfusion
- B. Adequate oxygen supply
- C. Reduced blood flow to tissues
- D. Hypertension

Correct Ans: C

90. Septic shock is caused by:

- A. Trauma
- B. Blood loss
- C. Severe infection
- D. Allergy

Correct Ans: C

91. Hypersensitivity reactions are mediated by:

- A. RBCs
- B. Platelets
- C. Immune system
- D. Hormones

Correct Ans: C

92. Type I hypersensitivity is also called:

- A. Cytotoxic reaction
- B. Immune complex reaction
- C. Immediate hypersensitivity
- D. Delayed reaction

Correct Ans: C

93. Anaphylaxis is an example of:

- A. Type I hypersensitivity
- B. Type II hypersensitivity
- C. Type III hypersensitivity
- D. Type IV hypersensitivity

Correct Ans: A

94. Autoimmune diseases occur due to:

- A. Infection
- B. Loss of self-tolerance
- C. Nutritional deficiency
- D. Genetic mutation only

Correct Ans: B

95. Systemic lupus erythematosus is:

- A. Infectious disease
- B. Autoimmune disease
- C. Metabolic disease
- D. Degenerative disease

Correct Ans: B

96. Benign tumors are characterized by:

- A. Rapid growth and metastasis
- B. Slow growth and no metastasis
- C. Poor differentiation
- D. Tissue invasion

Correct Ans: B

97. Malignant tumors show:

- A. Encapsulation
- B. Limited growth
- C. Invasion and metastasis
- D. Regression

Correct Ans: C

98. Grading of cancer is based on:

- A. Tumor size

- B. Cell differentiation
- C. Metastasis
- D. Location

Correct Ans: B

99. Staging of cancer depends on:

- A. Cell shape
- B. Tumor spread
- C. Age of patient
- D. Gender

Correct Ans: B

100. Chemotherapy mainly acts by:

- A. Stimulating immunity
- B. Destroying rapidly dividing cells
- C. Improving nutrition
- D. Increasing oxygen supply

Correct Ans: B

101. Fever is caused by:

- A. Hypoglycemia
- B. Pyrogens
- C. Dehydration
- D. Hypoxia

Correct Ans: B

102. Pyrogens act on:

- A. Liver
- B. Heart
- C. Hypothalamus
- D. Kidney

Correct Ans: C

103. Pain is mediated by:

- A. Prostaglandins
- B. Insulin
- C. Hemoglobin
- D. Albumin

Correct Ans: A

104. Necrosis is defined as:

- A. Programmed cell death
- B. Reversible injury
- C. Uncontrolled cell death

- D. Cell adaptation

Correct Ans: C

105. Apoptosis differs from necrosis because it is:

- A. Inflammatory
- B. Accidental
- C. Programmed
- D. Pathological only

Correct Ans: C

106. Ischemia results in:

- A. Increased oxygen
- B. Reduced blood supply
- C. Increased nutrients
- D. Normal metabolism

Correct Ans: B

107. Hypoxia differs from ischemia because hypoxia is:

- A. Reduced oxygen only
- B. Reduced blood flow
- C. Increased CO₂
- D. Increased glucose

Correct Ans: A

108. Cyanosis occurs due to:

- A. Increased hemoglobin
- B. Deoxygenated hemoglobin
- C. Increased oxygen
- D. Anemia

Correct Ans: B

109. Acidosis affects enzyme activity by:

- A. Increasing activity
- B. Denaturing enzymes
- C. Stabilizing enzymes
- D. No effect

Correct Ans: B

110. Alkalosis primarily affects:

- A. Enzyme function
- B. Bone growth
- C. Vision

D. Hearing

Correct Ans: A

111. Disease refers to:

- A. Normal function
- B. Deviation from normal health
- C. Adaptation
- D. Repair

Correct Ans: B

112. Etiology means:

- A. Study of disease
- B. Cause of disease
- C. Treatment
- D. Diagnosis

Correct Ans: B

113. Pathogenesis describes:

- A. Symptoms
- B. Structural changes
- C. Mechanism of disease development
- D. Treatment

Correct Ans: C

114. Prognosis refers to:

- A. Diagnosis
- B. Outcome of disease
- C. Cause
- D. Prevention

Correct Ans: B

115. Morbidity refers to:

- A. Death rate
- B. Disease frequency
- C. Birth rate
- D. Recovery

Correct Ans: B

116. Mortality indicates:

- A. Disease occurrence
- B. Death rate
- C. Survival rate
- D. Morbidity

Correct Ans: B

117. Screening tests are used for:

- A. Treatment
- B. Prevention
- C. Early detection
- D. Surgery

Correct Ans: C

118. Risk factor increases the chance of:

- A. Cure
- B. Disease development
- C. Recovery
- D. Immunity

Correct Ans: B

119. Prevention of disease includes:

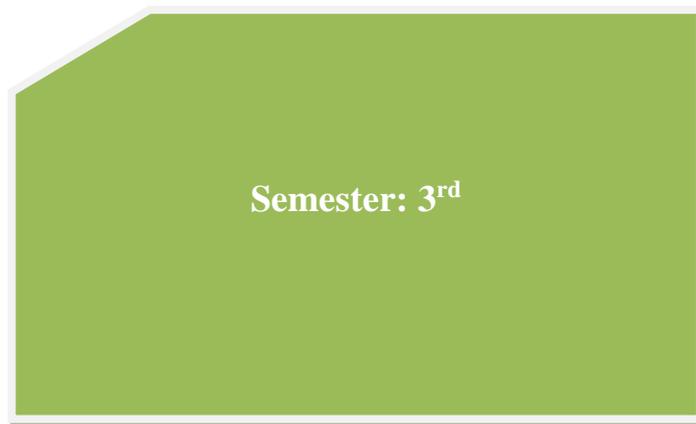
- A. Primary, secondary, tertiary
- B. Only primary
- C. Only secondary
- D. Only tertiary

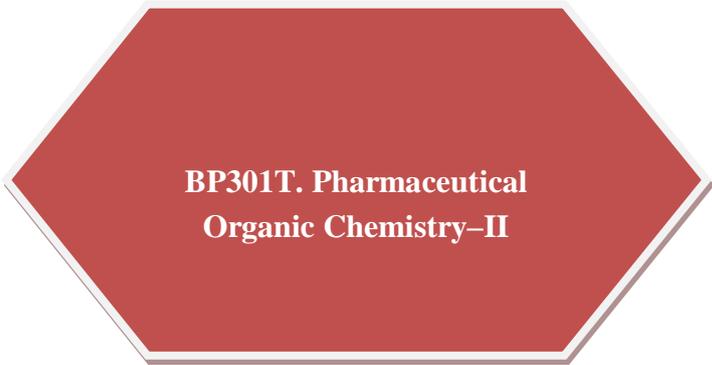
Correct Ans: A

120. Health is defined by WHO as:

- A. Absence of disease
- B. Physical fitness only
- C. Complete physical, mental and social well-being
- D. Normal body weight

Correct Ans: C





**BP301T. Pharmaceutical
Organic Chemistry-II**

1. Benzene has the molecular formula:

- A. C_6H_{12}
- B. C_6H_6
- C. C_6H_5
- D. C_6H_{10}

Correct answer: B

2. Degree of unsaturation in benzene is:

- A. 2
- B. 3
- C. 4
- D. 5

Correct answer: C

3. Benzene does not undergo addition reactions easily due to:

- A. High stability
- B. Presence of double bonds
- C. Ring strain
- D. Weak bonds

Correct answer: A

4. Kekulé structure of benzene contains:

- A. Six single bonds
- B. Three double bonds
- C. Alternating single and double bonds
- D. Only double bonds

Correct answer: C

5. Experimental evidence for planar structure of benzene is:

- A. Heat of hydrogenation
- B. Bond length equality
- C. Molecular formula
- D. Color

Correct answer: B

6. Carbon atoms in benzene are:

- A. sp hybridized
- B. sp^2 hybridized
- C. sp^3 hybridized
- D. Unhybridized

Correct answer: B

7. π -electrons in benzene are:

- A. Localized
- B. Delocalized
- C. Absent
- D. Fixed

Correct answer: B

8. Resonance energy of benzene is about:

- A. 36 kcal/mol
- B. 18 kcal/mol
- C. 12 kcal/mol
- D. 6 kcal/mol

Correct answer: B

9. Aromatic compounds must obey:

- A. Markovnikov's rule
- B. Huckel's rule
- C. Saytzeff rule
- D. Baeyer rule

Correct answer: B

10. Huckel's rule requires:

- A. $(4n)$ π electrons
- B. $(4n+2)$ π electrons
- C. $(2n+1)$ π electrons
- D. $(2n)$ π electrons

Correct answer: B

11. Benzene contains how many π electrons?

- A. 2
- B. 4
- C. 6
- D. 8

Correct answer: C

12. Nitration of benzene requires:

- A. Dilute HNO_3
- B. Concentrated HNO_3 only
- C. $HNO_3 + H_2SO_4$
- D. $HNO_3 + HCl$

Correct answer: C

13. Electrophile in nitration of benzene is:

- A. NO_2^-
- B. NO_2^+
- C. NO_3^-
- D. N_2O_5

Correct answer: B

14. Sulphonation of benzene is reversible because:

- A. Reaction is slow
- B. SO_3 is weak electrophile
- C. Reaction is exothermic
- D. Desulphonation occurs

Correct answer: D

15. Halogenation of benzene requires:

- A. UV light
- B. Lewis acid catalyst
- C. High temperature
- D. Base

Correct answer: B

16. Catalyst used in chlorination of benzene is:

- A. Fe
- B. FeCl_3
- C. Al
- D. ZnCl_2

Correct answer: B

17. Friedel–Crafts alkylation uses catalyst:

- A. H_2SO_4
- B. AlCl_3
- C. FeCl_3
- D. ZnCl_2

Correct answer: B

18. Friedel–Crafts alkylation leads to:

- A. Rearrangement
- B. Polyalkylation
- C. Carbocation formation

D. All of the above

Correct answer: D

19. Friedel–Crafts acylation avoids rearrangement because:

- A. Acylium ion is stable
- B. Reaction is slow
- C. Catalyst is weak
- D. Benzene deactivates

Correct answer: A

20. Friedel–Crafts reaction fails with:

- A. Alkyl benzene
- B. Nitrobenzene
- C. Toluene
- D. Anisole

Correct answer: B

21. Activating groups increase:

- A. Ring stability
- B. Electrophilic substitution rate
- C. Acidity
- D. Basicity

Correct answer: B

22. Deactivating groups decrease:

- A. Electron density
- B. Reactivity
- C. Both A and B
- D. Orientation

Correct answer: C

23. Ortho–para directing groups are generally:

- A. Electron withdrawing
- B. Electron donating
- C. Neutral
- D. Positively charged

Correct answer: B

24. Nitro group directs substitution to:

- A. Ortho
- B. Para
- C. Meta

D. All positions

Correct answer: C

25. Methyl group is:

- A. Deactivating
- B. Meta directing
- C. Ortho–para directing
- D. Strongly withdrawing

Correct answer: C

26. Structure of DDT contains:

- A. Benzene + chlorine
- B. Two phenyl rings
- C. Trichloroethane nucleus
- D. All of the above

Correct answer: D

27. DDT is mainly used as:

- A. Fungicide
- B. Herbicide
- C. Insecticide
- D. Rodenticide

Correct answer: C

28. Saccharin is used as:

- A. Preservative
- B. Sweetening agent
- C. Flavoring agent
- D. Coloring agent

Correct answer: B

29. BHC stands for:

- A. Benzene hexachloride
- B. Benzyl hexachloride
- C. Benzoyl hexachloride
- D. Benzyl hydrochloride

Correct answer: A

30. Chloramine is used as:

- A. Antiseptic
- B. Disinfectant
- C. Antibiotic
- D. Analgesic

Correct answer: B

31. Phenols are more acidic than alcohols due to:

- A. Inductive effect
- B. Resonance stabilization
- C. Hydrogen bonding
- D. Molecular weight

Correct answer: B

32. Electron withdrawing groups on phenol:

- A. Decrease acidity
- B. Increase acidity
- C. No effect
- D. Destroy acidity

Correct answer: B

33. Phenol gives violet color with:

- A. NaOH
- B. FeCl₃
- C. HCl
- D. Br₂ water

Correct answer: B

34. Phenol reacts with bromine water to give:

- A. Monobromophenol
- B. Dibromophenol
- C. Tribromophenol
- D. Bromobenzene

Correct answer: C

35. Cresols are:

- A. Dihydroxy benzenes
- B. Alkyl phenols
- C. Carboxylic acids
- D. Amines

Correct answer: B

36. Resorcinol is:

- A. o-dihydroxy benzene
- B. m-dihydroxy benzene
- C. p-dihydroxy benzene
- D. Trihydroxy benzene

Correct answer: B

37. Naphthols are:

- A. Monohydroxy derivatives of naphthalene
- B. Polyhydroxy benzene
- C. Carboxylic acids
- D. Amines

Correct answer: A

38. Aromatic amines are basic due to:

- A. Lone pair on nitrogen
- B. Aromatic ring
- C. Hydrogen bonding
- D. Steric effect

Correct answer: A

39. Aniline is less basic than alkyl amines due to:

- A. Resonance
- B. Inductive effect
- C. Steric hindrance
- D. Hydrogen bonding

Correct answer: A

40. Diazotization reaction occurs at:

- A. 0–5 °C
- B. 25 °C
- C. 50 °C
- D. 100 °C

Correct answer: A

41. Phenols are more acidic than alcohols due to:

- A. Inductive effect
- B. Resonance stabilization
- C. Hydrogen bonding
- D. Molecular weight

Correct answer: B

42. Electron-withdrawing groups on phenol:

- A. Decrease acidity
- B. Increase acidity
- C. Have no effect

D. Destroy acidity

Correct answer: B

43. Phenol gives a violet colour with:

- A. Sodium hydroxide
- B. Ferric chloride
- C. Hydrochloric acid
- D. Bromine water

Correct answer: B

44. Reaction of phenol with bromine water gives:

- A. Monobromophenol
- B. Dibromophenol
- C. Tribromophenol
- D. Bromobenzene

Correct answer: C

45. Cresols are chemically classified as:

- A. Dihydroxy benzenes
- B. Alkyl phenols
- C. Aromatic acids
- D. Aromatic amines

Correct answer: B

46. Resorcinol is:

- A. Ortho-dihydroxy benzene
- B. Meta-dihydroxy benzene
- C. Para-dihydroxy benzene
- D. Trihydroxy benzene

Correct answer: B

47. Naphthols are:

- A. Monohydroxy derivatives of naphthalene
- B. Polyhydroxy benzenes
- C. Aromatic acids
- D. Aromatic amines

Correct answer: A

48. Aromatic amines are basic mainly due to:

- A. Lone pair of electrons on nitrogen
- B. Aromatic ring current

- C. Hydrogen bonding
- D. Steric effect

Correct answer: A

49. Aniline is less basic than aliphatic amines because of:

- A. Resonance delocalization of lone pair
- B. Inductive effect
- C. Steric hindrance
- D. Hydrogen bonding

Correct answer: A

50. Diazotization of aromatic amines is carried out at:

- A. 0–5 °C
- B. 25 °C
- C. 50 °C
- D. 100 °C

Correct answer: A

51. Aryldiazonium salts are mainly used in:

- A. Coupling reactions
- B. Oxidation reactions
- C. Reduction reactions
- D. Polymerization reactions

Correct answer: A

52. Benzoic acid is a:

- A. Strong acid
- B. Weak acid
- C. Neutral compound
- D. Basic compound

Correct answer: B

53. Electron-withdrawing substituents on benzoic acid:

- A. Decrease acidity
- B. Increase acidity
- C. Have no effect
- D. Neutralize acidity

Correct answer: B

54. Benzoic acid reacts with alcohol in presence of acid to form:

- A. Ether
- B. Ester
- C. Aldehyde
- D. Ketone

Correct answer: B

55. Fats are:

- A. Esters of glycerol
- B. Esters of fatty acids
- C. Triglycerides
- D. All of the above

Correct answer: D

56. Saturated fatty acids contain:

- A. Double bonds
- B. Triple bonds
- C. Only single bonds
- D. Aromatic rings

Correct answer: C

57. Unsaturated fatty acids decolorize:

- A. KMnO_4
- B. Bromine water
- C. FeCl_3
- D. NaOH

Correct answer: B

58. Hydrolysis of fats produces:

- A. Fatty acids + glycerol
- B. Alcohols
- C. Aldehydes
- D. Ketones

Correct answer: A

59. Hydrogenation of oils:

- A. Increases unsaturation
- B. Decreases melting point
- C. Converts oils to fats
- D. Causes rancidity

Correct answer: C

60. Saponification is hydrolysis of fats with:

- A. Acid
- B. Enzyme
- C. Alkali
- D. Water only

Correct answer: C

61. Rancidity leads to:

- A. Pleasant smell
- B. Bad odor and taste
- C. Increased nutrition
- D. Polymerization

Correct answer: B

62. Drying oils are used in:

- A. Medicines
- B. Paints and varnishes
- C. Cosmetics
- D. Food

Correct answer: B

63. Acid value measures:

- A. Free fatty acids
- B. Ester content
- C. Unsaturation
- D. Molecular weight

Correct answer: A

64. Iodine value indicates:

- A. Molecular weight
- B. Degree of unsaturation
- C. Acid strength
- D. Glycerol content

Correct answer: B

65. Naphthalene contains:

- A. One benzene ring
- B. Two fused benzene rings
- C. Three rings
- D. Saturated rings

Correct answer: B

66. Naphthalene undergoes substitution mainly at:

- A. α -position
- B. β -position
- C. Both equally
- D. Random

Correct answer: A

67. Anthracene has:

- A. Two rings
- B. Three linear rings
- C. Three angular rings
- D. Four rings

Correct answer: B

68. Phenanthrene is:

- A. Linear
- B. Angular
- C. Saturated
- D. Non-aromatic

Correct answer: B

69. Diphenylmethane contains:

- A. One phenyl ring
- B. Two phenyl rings
- C. Three phenyl rings
- D. Four phenyl rings

Correct answer: B

70. Triphenylmethane contains:

- A. One phenyl ring
- B. Two phenyl rings
- C. Three phenyl rings
- D. Four phenyl rings

Correct answer: C

71. Many polynuclear hydrocarbons are:

- A. Harmless
- B. Carcinogenic
- C. Non-reactive
- D. Saturated

Correct answer: B

72. Cycloalkanes are:

- A. Aliphatic
- B. Aromatic
- C. Alicyclic
- D. Heterocyclic

Correct answer: C

73. Cyclopropane has bond angle:

- A. 60°
- B. 90°
- C. 109.5°
- D. 120°

Correct answer: A

74. High strain in cyclopropane is due to:

- A. Angle strain
- B. Torsional strain
- C. Both A and B
- D. No strain

Correct answer: C

75. Baeyer's strain theory assumes rings are:

- A. Planar
- B. Non-planar
- C. Flexible
- D. Aromatic

Correct answer: A

76. Limitation of Baeyer's theory is:

- A. Applies only to small rings
- B. Assumes planarity
- C. Ignores torsional strain
- D. All of the above

Correct answer: D

77. Sachse–Mohr theory explains stability of:

- A. Cyclopropane
- B. Cyclobutane
- C. Cyclohexane
- D. Cyclopentane

Correct answer: C

78. Cyclohexane exists in:

- A. Chair form
- B. Boat form
- C. Twist form
- D. All of the above

Correct answer: D

79. Cyclopropane shows:

- A. Substitution only
- B. Addition reactions
- C. Aromaticity
- D. Inert behavior

Correct answer: B

80. Cyclobutane strain is due to:

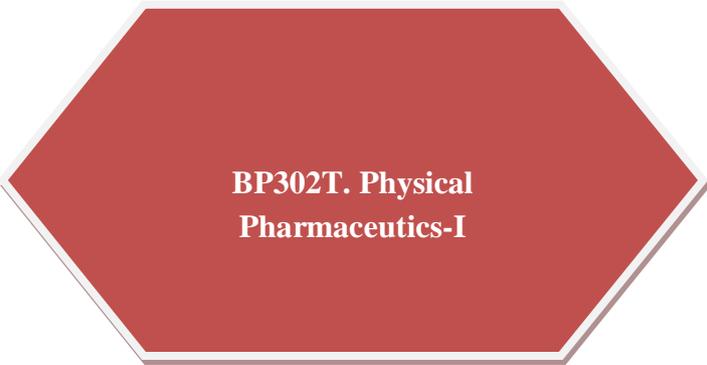
- A. Angle strain only
- B. Torsional strain only
- C. Both
- D. No strain

Correct answer: C

81. Cycloalkanes follow formula:

- A. C_nH_{2n+2}
- B. C_nH_{2n}
- C. C_nH_{2n-2}
- D. C_nH_n

Correct answer: B



**BP302T. Physical
Pharmaceutics-I**

1. Solubility is defined as:

- A. Rate of dissolution
- B. Amount of solute dissolved in solvent
- C. Maximum amount of solute dissolved in a solvent at a given temperature
- D. Degree of ionization

Correct answer: C

2. Solubility is usually expressed as:

- A. Percentage
- B. Molarity
- C. Parts of solvent required to dissolve one part of solute
- D. All of the above

Correct answer: D

3. Solute–solvent interaction mainly depends on:

- A. Molecular weight
- B. Chemical nature
- C. Temperature
- D. Pressure

Correct answer: B

4. “Like dissolves like” principle is based on:

- A. Density
- B. Polarity
- C. Molecular size
- D. pH

Correct answer: B

5. Ideal solubility of a drug depends on:

- A. Melting point
- B. Partition coefficient
- C. Hydrogen bonding
- D. Crystal habit

Correct answer: A

6. High melting point drugs generally show:

- A. High solubility
- B. Low solubility
- C. No solubility

D. pH-dependent solubility

Correct answer: B

7. Solvation is the interaction between:

- A. Solute–solute
- B. Solvent–solvent
- C. Solute–solvent
- D. Gas–liquid

Correct answer: C

8. Hydration refers to solvation by:

- A. Alcohol
- B. Ether
- C. Water
- D. Oil

Correct answer: C

9. Association in solution leads to:

- A. Increased solubility
- B. Decreased solubility
- C. No change
- D. Ionization

Correct answer: B

10. Diffusion is movement of molecules from:

- A. Low to high concentration
- B. High to low concentration
- C. Solid to liquid
- D. Gas to solid

Correct answer: B

11. Fick’s law of diffusion relates diffusion rate to:

- A. Pressure
- B. Concentration gradient
- C. Temperature only
- D. Solvent viscosity

Correct answer: B

12. Solubility of gases in liquids is governed by:

- A. Raoult’s law
- B. Henry’s law

- C. Dalton's law
- D. Boyle's law

Correct answer: B

13. Solubility of gas decreases with:

- A. Increase in pressure
- B. Decrease in temperature
- C. Increase in temperature
- D. Increase in volume

Correct answer: C

14. Binary solutions consist of:

- A. One component
- B. Two components
- C. Three components
- D. Four components

Correct answer: B

15. Ideal solutions obey:

- A. Henry's law
- B. Raoult's law
- C. Dalton's law
- D. Graham's law

Correct answer: B

16. Raoult's law is applicable to:

- A. Real solutions
- B. Ideal solutions
- C. Electrolytes
- D. Suspensions

Correct answer: B

17. Real solutions show:

- A. Positive deviation
- B. Negative deviation
- C. No deviation
- D. Both A and B

Correct answer: D

18. Partially miscible liquids show:

- A. Complete miscibility
- B. No miscibility
- C. Limited miscibility

- D. Immiscibility

Correct answer: C

19. Critical solution temperature is the temperature at which:

- A. Solubility is minimum
- B. Two liquids become completely miscible
- C. Vapour pressure is maximum
- D. Density becomes zero

Correct answer: B

20. Upper critical solution temperature shows miscibility:

- A. Below temperature
- B. Above temperature
- C. At room temperature
- D. At freezing point

Correct answer: B

21. Distribution law is also known as:

- A. Henry's law
- B. Nernst distribution law
- C. Raoult's law
- D. Dalton's law

Correct answer: B

22. Distribution law applies when solute exists in:

- A. Same molecular state
- B. Ionized form
- C. Associated form
- D. Decomposed form

Correct answer: A

23. Distribution coefficient is ratio of:

- A. Solubility
- B. Concentrations in two immiscible solvents
- C. Densities
- D. Viscosities

Correct answer: B

24. Major limitation of distribution law is:

- A. Ionization of solute
- B. Association of solute
- C. Chemical reaction
- D. All of the above

Correct answer: D

25. Distribution law is useful in:

- A. Extraction
- B. Partition chromatography
- C. Drug absorption studies
- D. All of the above

Correct answer: D

26. Matter exists in how many fundamental states?

- A. Two
- B. Three
- C. Four
- D. Five

Correct answer: B

27. Change from solid to liquid is called:

- A. Sublimation
- B. Fusion
- C. Condensation
- D. Deposition

Correct answer: B

28. Latent heat of fusion is absorbed during:

- A. Solid → Liquid
- B. Liquid → Gas
- C. Gas → Liquid
- D. Solid → Gas

Correct answer: A

29. Vapour pressure increases with:

- A. Increase in temperature
- B. Increase in volume
- C. Increase in pressure
- D. Decrease in temperature

Correct answer: A

30. Sublimation is transition from:

- A. Solid to gas
- B. Gas to solid
- C. Liquid to gas
- D. Liquid to solid

Correct answer: A

31. Critical point is defined as:

- A. Lowest temperature
- B. Highest pressure
- C. Temperature above which gas cannot be liquefied
- D. Freezing point

Correct answer: C

32. Eutectic mixture shows:

- A. Higher melting point
- B. Lower melting point
- C. Same melting point
- D. No melting

Correct answer: B

33. Aerosols used in inhalers are:

- A. Solid in solid
- B. Liquid in gas
- C. Gas in liquid
- D. Solid in liquid

Correct answer: B

34. Relative humidity is expressed as:

- A. Percentage
- B. Ratio
- C. Fraction
- D. Pressure

Correct answer: A

35. Liquid complexes are formed due to:

- A. Chemical reaction
- B. Weak intermolecular forces
- C. Covalent bonding
- D. Ionic bonding

Correct answer: B

36. Liquid crystals show properties of:

- A. Solids only
- B. Liquids only
- C. Both solids and liquids
- D. Gases

Correct answer: C

37. Glassy state is:

- A. Crystalline
- B. Supercooled liquid
- C. Amorphous solid
- D. Gas

Correct answer: C

38. Crystalline solids show:

- A. Random arrangement
- B. Long-range order
- C. No melting point
- D. Isotropy

Correct answer: B

39. Amorphous solids differ from crystalline solids by:

- A. Sharp melting point
- B. Lack of order
- C. Lower solubility
- D. Lower dissolution

Correct answer: B

40. Polymorphism is the ability to exist in:

- A. Different chemical forms
- B. Different crystalline forms
- C. Different molecular weights
- D. Different solvents

Correct answer: B

41. Surface tension is due to:

- A. Gravitational force
- B. Cohesive forces
- C. Adhesive forces
- D. Electrostatic forces

Correct answer: B

42. Surface free energy is energy required to:

- A. Increase surface area
- B. Reduce volume
- C. Increase pressure
- D. Reduce density

Correct answer: A

43. Unit of surface tension is:

- A. Dyne/cm
- B. Pascal
- C. Joule
- D. Newton

Correct answer: A

44. Surface tension decreases with:

- A. Increase in temperature
- B. Decrease in temperature
- C. Increase in pressure
- D. Increase in density

Correct answer: A

45. Interfacial tension exists between:

- A. Solid–solid
- B. Liquid–liquid
- C. Gas–gas
- D. Solid–gas

Correct answer: B

46. Spreading coefficient is related to:

- A. Wetting
- B. Adsorption
- C. Emulsification
- D. Solubility

Correct answer: A

47. Surfactants reduce:

- A. Density
- B. Viscosity
- C. Surface tension
- D. Solubility

Correct answer: C

48. HLB scale is used to classify:

- A. Solvents
- B. Surfactants
- C. Buffers
- D. Preservatives

Correct answer: B

49. High HLB value indicates:

- A. Lipophilic surfactant
- B. Hydrophilic surfactant
- C. Nonionic surfactant
- D. Cationic surfactant

Correct answer: B

50. Solubilization is increase in solubility by:

- A. pH adjustment
- B. Surfactants
- C. Heating
- D. Pressure

Correct answer: B

51. Complexation involves formation of:

- A. Covalent bonds
- B. Weak associations
- C. Ionic bonds only
- D. Hydrogen bonds only

Correct answer: B

52. Chelates are complexes formed by:

- A. Monodentate ligands
- B. Bidentate ligands
- C. Polydentate ligands
- D. Both B and C

Correct answer: D

53. Protein binding affects:

- A. Drug distribution
- B. Drug elimination
- C. Drug action
- D. All of the above

Correct answer: D

54. Highly protein-bound drugs show:

- A. Faster action
- B. Longer duration
- C. Rapid elimination
- D. No effect

Correct answer: B

55. Albumin mainly binds:

- A. Basic drugs
- B. Acidic drugs
- C. Neutral drugs
- D. Gases

Correct answer: B

56. Stability constant measures:

- A. Rate of reaction
- B. Strength of complex
- C. Solubility
- D. pH

Correct answer: B

57. Thermodynamic treatment involves:

- A. ΔG
- B. ΔH
- C. ΔS
- D. All of the above

Correct answer: D

58. pH scale was introduced by:

- A. Arrhenius
- B. Sorensen
- C. Bronsted
- D. Lewis

Correct answer: B

59. pH is defined as:

- A. $-\log[\text{OH}^-]$
- B. $-\log[\text{H}^+]$
- C. $\log[\text{H}^+]$
- D. $\log[\text{OH}^-]$

Correct answer: B

60. Electrometric pH measurement uses:

- A. Litmus
- B. pH meter
- C. Indicator paper
- D. Universal indicator

Correct answer: B

61. Buffer solutions resist change in:

- A. Temperature
- B. Pressure
- C. pH
- D. Volume

Correct answer: C

62. Acidic buffer consists of:

- A. Weak acid + its salt
- B. Strong acid + salt
- C. Weak base + salt
- D. Strong base + salt

Correct answer: A

63. Buffer capacity is maximum when:

- A. $\text{pH} = \text{pK}_a$
- B. $\text{pH} > \text{pK}_a$
- C. $\text{pH} < \text{pK}_a$
- D. $\text{pH} = 7$

Correct answer: A

64. Isotonic solutions have same:

- A. pH
- B. Osmotic pressure
- C. Density
- D. Viscosity

Correct answer: B

65. Blood is isotonic with:

- A. Distilled water
- B. 0.9% NaCl
- C. 5% glucose
- D. Both B and C

Correct answer: D

66. Hypotonic solutions cause:

- A. Shrinkage of cells
- B. Hemolysis

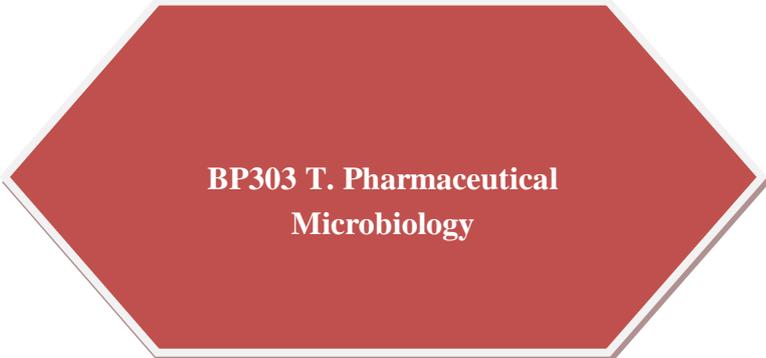
- C. No effect
- D. Coagulation

Correct answer: B

67. Buffers are used in pharmaceuticals to:

- A. Improve stability
- B. Improve solubility
- C. Reduce irritation
- D. All of the above

Correct answer: D



**BP303 T. Pharmaceutical
Microbiology**

1. Microbiology is the study of:

- A. Plants
- B. Animals
- C. Microorganisms
- D. Human anatomy

Correct answer: C

2. Father of Microbiology is:

- A. Robert Koch
- B. Louis Pasteur
- C. Alexander Fleming
- D. Joseph Lister

Correct answer: B

3. Branch of microbiology dealing with fungi is called:

- A. Bacteriology
- B. Virology
- C. Mycology
- D. Protozoology

Correct answer: C

4. Study of viruses is known as:

- A. Mycology
- B. Phycology
- C. Virology
- D. Parasitology

Correct answer: C

5. Prokaryotic cells lack:

- A. Ribosomes
- B. Cell wall
- C. True nucleus
- D. Plasma membrane

Correct answer: C

6. Example of prokaryotic organism is:

- A. Amoeba
- B. Yeast
- C. Bacteria
- D. Algae

Correct answer: C

7. Eukaryotic cells possess:

- A. No nucleus
- B. Membrane-bound organelles
- C. Circular DNA only
- D. 70S ribosomes

Correct answer: B

8. Bacterial cell wall is mainly composed of:

- A. Cellulose
- B. Chitin
- C. Peptidoglycan
- D. Lipopolysaccharide

Correct answer: C

9. Cocci bacteria are:

- A. Rod-shaped
- B. Spiral-shaped
- C. Spherical
- D. Filamentous

Correct answer: C

10. Bacilli are bacteria with:

- A. Spherical shape
- B. Rod shape
- C. Spiral shape
- D. Comma shape

Correct answer: B

11. Nutritional requirement providing carbon is:

- A. Proteins
- B. Vitamins
- C. Carbohydrates
- D. Minerals

Correct answer: C

12. Media containing blood is called:

- A. Simple media
- B. Enriched media
- C. Selective media
- D. Transport media

Correct answer: B

13. Temperature affecting bacterial growth is a:

- A. Chemical parameter
- B. Physical parameter
- C. Biological parameter
- D. Genetic factor

Correct answer: B

14. Log phase of bacterial growth shows:

- A. Cell death
- B. No growth
- C. Maximum multiplication
- D. Spore formation

Correct answer: C

15. Stationary phase occurs due to:

- A. Abundant nutrients
- B. Accumulation of toxic products
- C. Rapid multiplication
- D. Cell enlargement

Correct answer: B

16. Isolation of pure culture was first developed by:

- A. Pasteur
- B. Koch
- C. Fleming
- D. Jenner

Correct answer: B

17. Preservation of bacteria at very low temperature is:

- A. Lyophilization
- B. Incubation
- C. Autoclaving
- D. Pasteurization

Correct answer: A

18. Anaerobes grow best in absence of:

- A. Nitrogen
- B. Carbon dioxide
- C. Oxygen

D. Hydrogen

Correct answer: C

19. Total bacterial count includes:

- A. Only living cells
- B. Only dead cells
- C. Living and dead cells
- D. Spores only

Correct answer: C

20. Viable count estimates:

- A. Dead cells
- B. Living cells
- C. Spores
- D. Cell debris

Correct answer: B

21. Phase contrast microscopy is used to observe:

- A. Stained cells
- B. Living cells
- C. Dead cells
- D. Spores only

Correct answer: B

22. Dark field microscopy is useful for:

- A. Thick specimens
- B. Bright objects
- C. Thin organisms like spirochetes
- D. Viruses

Correct answer: C

23. Electron microscope uses:

- A. Light rays
- B. UV rays
- C. Electron beams
- D. X-rays

Correct answer: C

24. Resolving power of electron microscope is:

- A. Lower than light microscope
- B. Equal to light microscope
- C. Higher than light microscope

D. Same for all microscopes

Correct answer: C

25. Simple staining uses:

- A. Acidic dye
- B. Basic dye
- C. Neutral dye
- D. Fluorescent dye

Correct answer: B

26. Gram staining differentiates bacteria based on:

- A. Shape
- B. Motility
- C. Cell wall composition
- D. Size

Correct answer: C

27. Gram-positive bacteria appear:

- A. Pink
- B. Red
- C. Purple
- D. Colorless

Correct answer: C

28. Gram-negative bacteria appear:

- A. Purple
- B. Blue
- C. Green
- D. Pink

Correct answer: D

29. Acid-fast staining is used for:

- A. E. coli
- B. Mycobacterium
- C. Staphylococcus
- D. Streptococcus

Correct answer: B

30. Acid-fastness is due to presence of:

- A. Peptidoglycan
- B. Mycolic acid
- C. Lipoproteins

D. Teichoic acid

Correct answer: B

31. Indole test detects:

- A. Glucose fermentation
- B. Tryptophan breakdown
- C. Citrate utilization
- D. Acid production

Correct answer: B

32. Methyl red test detects:

- A. Mixed acid fermentation
- B. Protein digestion
- C. Gas production
- D. H₂S production

Correct answer: A

33. Voges–Proskauer test detects:

- A. Acetoin
- B. Indole
- C. Ammonia
- D. Alcohol

Correct answer: A

34. Citrate test detects ability to use:

- A. Glucose
- B. Lactose
- C. Citrate
- D. Starch

Correct answer: C

35. IMViC tests are mainly used for identification of:

- A. Streptococci
- B. Enterobacteriaceae
- C. Clostridia
- D. Mycoplasma

Correct answer: B

36. Sterilization is defined as:

- A. Killing pathogens only
- B. Killing vegetative cells
- C. Removal of dirt

D. Destruction of all forms of life

Correct answer: D

37. Moist heat sterilization includes:

- A. Hot air oven
- B. Autoclave
- C. Incineration
- D. Filtration

Correct answer: B

38. Autoclave works on principle of:

- A. Dry heat
- B. Moist heat under pressure
- C. Radiation
- D. Gas

Correct answer: B

39. Temperature used in autoclave is:

- A. 100°C
- B. 110°C
- C. 121°C
- D. 150°C

Correct answer: C

40. Dry heat sterilization is done by:

- A. Autoclave
- B. Hot air oven
- C. UV rays
- D. Filtration

Correct answer: B

41. Ethylene oxide is a:

- A. Liquid sterilant
- B. Gaseous sterilant
- C. Solid sterilant
- D. Radiation sterilant

Correct answer: B

42. Radiation sterilization includes:

- A. UV rays
- B. Gamma rays
- C. X-rays
- D. All of the above

Correct answer: D

43. Filtration is suitable for:

- A. Powders
- B. Heat-sensitive liquids
- C. Glassware
- D. Metal instruments

Correct answer: B

44. Efficiency of sterilization is evaluated by:

- A. Chemical indicators
- B. Biological indicators
- C. Physical indicators
- D. All of the above

Correct answer: D

45. Biological indicator for moist heat is:

- A. *Bacillus subtilis*
- B. *Clostridium tetani*
- C. *Bacillus stearothermophilus*
- D. *E. coli*

Correct answer: C

46. Sterility indicators confirm:

- A. Presence of microbes
- B. Absence of microbes
- C. Growth rate
- D. Metabolism

Correct answer: B

47. Large-scale sterilization equipment includes:

- A. Incubator
- B. Autoclave
- C. Refrigerator
- D. Centrifuge

Correct answer: B

48. Mechanical sterilization is achieved by:

- A. Heat
- B. Radiation
- C. Filtration
- D. Chemicals

Correct answer: C

49. Fungi are:

- A. Prokaryotic
- B. Eukaryotic
- C. Autotrophic
- D. Photosynthetic

Correct answer: B

50. Fungal cell wall contains:

- A. Cellulose
- B. Peptidoglycan
- C. Chitin
- D. Lipopolysaccharide

Correct answer: C

51. Yeast reproduces mainly by:

- A. Binary fission
- B. Budding
- C. Fragmentation
- D. Spore fusion

Correct answer: B

52. Viruses are:

- A. Living cells
- B. Non-living particles
- C. Obligate intracellular parasites
- D. Free-living organisms

Correct answer: C

53. Virus contains:

- A. DNA only
- B. RNA only
- C. DNA or RNA
- D. Both DNA and RNA always

Correct answer: C

54. Cultivation of viruses requires:

- A. Nutrient agar
- B. Living host cells
- C. Blood agar
- D. MacConkey agar

Correct answer: B

55. Disinfectants are used on:

- A. Living tissues

- B. Dead surfaces
- C. Instruments inside body
- D. Blood

Correct answer: B

56. Antiseptics are used on:

- A. Floors
- B. Instruments
- C. Living tissues
- D. Walls

Correct answer: C

57. Phenol is an example of:

- A. Antiseptic
- B. Disinfectant
- C. Antibiotic
- D. Preservative

Correct answer: B

58. Bactericidal agents:

- A. Inhibit growth
- B. Kill bacteria
- C. Preserve bacteria
- D. Stimulate growth

Correct answer: B

59. Bacteriostatic agents:

- A. Kill bacteria
- B. Promote growth
- C. Inhibit growth
- D. Destroy spores

Correct answer: C

60. Factors affecting disinfection include:

- A. Concentration
- B. Time
- C. Temperature
- D. All of the above

Correct answer: D

61. Evaluation of bactericidal action includes:

- A. Phenol coefficient

- B. MIC
- C. MBC
- D. All of the above

Correct answer: D

62. Sterility testing is done to ensure:

- A. Potency
- B. Purity
- C. Absence of microorganisms
- D. Stability

Correct answer: C

63. Sterility test for liquids uses:

- A. Direct plating
- B. Membrane filtration
- C. Pour plate
- D. Spread plate

Correct answer: B

64. IP stands for:

- A. Indian Pharmacology
- B. Indian Pharmacopoeia
- C. International Pharmacy
- D. Internal Procedure

Correct answer: B

65. USP refers to:

- A. United States Pharmacopoeia
- B. Universal Sterility Procedure
- C. United Sterilization Protocol
- D. United Scientific Process

Correct answer: A

66. BP stands for:

- A. Biological Product
- B. British Pharmacopoeia
- C. Bacterial Procedure
- D. Basic Practice

Correct answer: B

67. Ophthalmic preparations must be:

- A. Preserved only
- B. Sterile
- C. Isotonic only

- D. Buffered only

Correct answer: B

68. Turbidity in sterility test indicates:

- A. Sterility
- B. Contamination
- C. Neutrality
- D. pH change

Correct answer: B

69. Incubation temperature for sterility testing is:

- A. 10°C
- B. 25–37°C
- C. 50°C
- D. 60°C

Correct answer: B

70. Growth medium used in sterility testing includes:

- A. Nutrient agar
- B. Fluid thioglycollate medium
- C. MacConkey agar
- D. Blood agar

Correct answer: B

71. Fungal sterility test uses incubation at:

- A. 4°C
- B. 15°C
- C. 25°C
- D. 45°C

Correct answer: C

72. Disinfectant efficiency is reduced by:

- A. Organic matter
- B. Proper dilution
- C. High temperature
- D. Long exposure

Correct answer: A

73. Aseptic area is designed to:

- A. Promote microbial growth
- B. Eliminate contamination

- C. Increase humidity
- D. Reduce ventilation

Correct answer: B

74. Laminar airflow provides:

- A. Turbulent air
- B. Filtered unidirectional air
- C. Hot air
- D. Humid air

Correct answer: B

75. HEPA filters remove particles up to:

- A. 1 μm
- B. 0.3 μm
- C. 5 μm
- D. 10 μm

Correct answer: B

76. Source of contamination in aseptic area includes:

- A. Personnel
- B. Air
- C. Equipment
- D. All of the above

Correct answer: D

77. Clean room classification is based on:

- A. Temperature
- B. Particle count
- C. Pressure
- D. Humidity

Correct answer: B

78. Microbiological assay measures:

- A. Chemical content
- B. Biological activity
- C. Physical property
- D. Toxicity

Correct answer: B

79. Antibiotic assay is based on:

- A. Turbidity
- B. Inhibition of microbial growth

- C. Chemical reaction
- D. Color change

Correct answer: B

80. Cup plate method is used for:

- A. Vitamin assay
- B. Antibiotic assay
- C. Amino acid assay
- D. Enzyme assay

Correct answer: B

81. Turbidimetric method measures:

- A. Zone of inhibition
- B. Optical density
- C. pH
- D. Temperature

Correct answer: B

82. Vitamin assay uses:

- A. Bacteria
- B. Fungi
- C. Animals
- D. Chemicals

Correct answer: A

83. Amino acid assay uses:

- A. E. coli
- B. Lactobacillus
- C. Staphylococcus
- D. Pseudomonas

Correct answer: B

84. Standardization compares:

- A. Two unknown samples
- B. Test with standard
- C. Two standards
- D. Control only

Correct answer: B

85. New antibiotic assessment includes:

- A. Spectrum of activity
- B. Toxicity
- C. Potency

D. All of the above

Correct answer: D

86. Agar diffusion assay depends on:

- A. Diffusion rate
- B. Solubility
- C. Stability
- D. Density

Correct answer: A

87. Larger inhibition zone indicates:

- A. Lower potency
- B. Higher potency
- C. No activity
- D. Resistance

Correct answer: B

88. Aseptic processing requires:

- A. Open handling
- B. Controlled environment
- C. No filtration
- D. No sterilization

Correct answer: B

89. Contamination control involves:

- A. Training
- B. Gowning
- C. Monitoring
- D. All of the above

Correct answer: D

90. Validation of aseptic area ensures:

- A. Appearance
- B. Compliance
- C. Sterility assurance
- D. Profit

Correct answer: C

91. Microbial load testing measures:

- A. Viability
- B. Number of microorganisms
- C. Growth rate
- D. Morphology

Correct answer: B

92. Positive control shows:

- A. No growth
- B. Expected growth
- C. Reduced growth
- D. Contamination

Correct answer: B

93. Negative control shows:

- A. Growth
- B. No growth
- C. Sporulation
- D. Mutation

Correct answer: B

94. Antibiotic potency is expressed in:

- A. Grams
- B. Units
- C. Moles
- D. Percent

Correct answer: B

95. Agar used in microbiological assays is:

- A. Nutrient agar
- B. Agar-agar
- C. Blood agar
- D. Chocolate agar

Correct answer: B

96. Bioassay results are compared statistically using:

- A. ANOVA
- B. t-test
- C. Regression analysis
- D. All of the above

Correct answer: D

97. Microbial spoilage leads to:

- A. Improved quality
- B. Drug degradation
- C. Sterilization
- D. Stabilization

Correct answer: B

98. Spoilage of pharmaceuticals is caused by:

- A. Bacteria
- B. Fungi
- C. Yeast
- D. All of the above

Correct answer: D

99. Factors affecting spoilage include:

- A. pH
- B. Moisture
- C. Temperature
- D. All of the above

Correct answer: D

100. Source of microbial contamination includes:

- A. Raw materials
- B. Water
- C. Air
- D. All of the above

Correct answer: D

101. Preservatives are added to:

- A. Enhance color
- B. Prevent microbial growth
- C. Increase viscosity
- D. Improve taste

Correct answer: B

102. Common pharmaceutical preservative is:

- A. Sodium chloride
- B. Parabens
- C. Glucose
- D. Starch

Correct answer: B

103. Preservative efficacy testing ensures:

- A. Potency
- B. Safety
- C. Microbial protection

D. Stability only

Correct answer: C

104. Microbial stability refers to:

- A. Chemical stability
- B. Physical stability
- C. Resistance to microbial growth
- D. Thermal stability

Correct answer: C

105. Cell culture is growth of cells:

- A. In animals
- B. In vitro
- C. In plants
- D. In soil

Correct answer: B

106. Primary cell culture is obtained directly from:

- A. Cell line
- B. Tissue
- C. Tumor
- D. Bacteria

Correct answer: B

107. Established cell lines can:

- A. Divide indefinitely
- B. Divide once
- C. Not divide
- D. Sporulate

Correct answer: A

108. Transformed cell cultures are:

- A. Normal cells
- B. Cancerous cells
- C. Bacterial cells
- D. Fungal cells

Correct answer: B

109. Animal cell culture requires:

- A. Simple media
- B. Enriched media
- C. Synthetic media

D. Selective media
Correct answer: B

110. CO₂ incubator maintains:

- A. pH
 - B. Temperature
 - C. Humidity
 - D. All of the above
- Correct answer: D*

111. Growth medium for animal cells contains:

- A. Serum
 - B. Agar
 - C. Antibiotics only
 - D. Sugar only
- Correct answer: A*

112. Application of cell culture includes:

- A. Vaccine production
 - B. Drug testing
 - C. Cancer research
 - D. All of the above
- Correct answer: D*

113. Contamination in cell culture is commonly due to:

- A. Bacteria
 - B. Fungi
 - C. Mycoplasma
 - D. All of the above
- Correct answer: D*

114. Spoilage detection includes:

- A. Visual inspection
 - B. pH change
 - C. Odor change
 - D. All of the above
- Correct answer: D*

115. Preservatives are less effective at:

- A. Low pH
- B. Neutral pH
- C. High pH

D. Acidic pH
Correct answer: C

116. Assessment of contamination is done by:

- A. Microbial limit test
 - B. Sterility test
 - C. Endotoxin test
 - D. All of the above
- Correct answer: D*

117. Endotoxins are produced by:

- A. Gram-positive bacteria
 - B. Gram-negative bacteria
 - C. Fungi
 - D. Viruses
- Correct answer: B*

118. Pyrogen testing is done to detect:

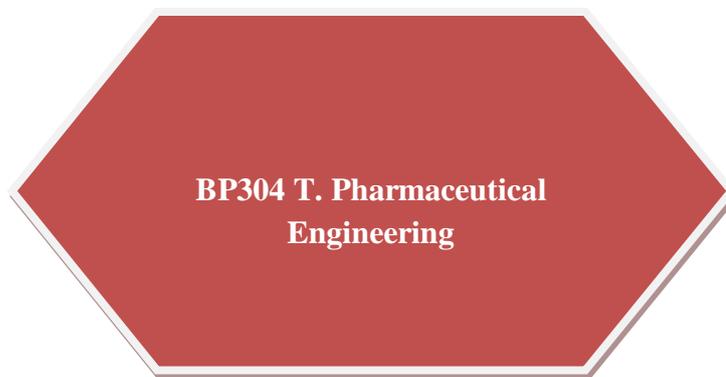
- A. Microbes
 - B. Toxins
 - C. Endotoxins
 - D. Antibiotics
- Correct answer: C*

119. Pharmaceutical spoilage reduces:

- A. Efficacy
 - B. Safety
 - C. Shelf life
 - D. All of the above
- Correct answer: D*

120. Microbiology in pharmacy is important for:

- A. Drug safety
 - B. Quality control
 - C. Regulatory compliance
 - D. All of the above
- Correct answer: D*



1. Reynolds number is used to predict:

- A. Pressure drop
- B. Type of fluid flow
- C. Velocity of fluid
- D. Density of fluid

Correct answer: B

2. Laminar flow occurs when Reynolds number is:

- A. > 4000
- B. < 2000
- C. $= 4000$
- D. > 3000

Correct answer: B

3. Turbulent flow is characterized by:

- A. Smooth layers
- B. Random motion
- C. No energy loss
- D. Low velocity

Correct answer: B

4. Bernoulli's theorem is based on conservation of:

- A. Mass
- B. Momentum
- C. Energy
- D. Velocity

Correct answer: C

5. Bernoulli's equation is applicable to:

- A. Compressible fluids
- B. Ideal fluids
- C. Viscous fluids
- D. Plastic fluids

Correct answer: B

6. Energy loss in fluid flow is mainly due to:

- A. Gravity
- B. Friction
- C. Density
- D. Pressure

Correct answer: B

7. Venturimeter is used to measure:

- A. Pressure
- B. Velocity
- C. Flow rate
- D. Density

Correct answer: C

8. Orifice meter causes:

- A. No pressure loss
- B. Maximum pressure loss
- C. Minimal pressure loss
- D. No energy loss

Correct answer: B

9. Pitot tube measures:

- A. Flow rate
- B. Static pressure
- C. Fluid velocity
- D. Density

Correct answer: C

10. Rotameter works on principle of:

- A. Bernoulli's theorem
- B. Variable area
- C. Fixed orifice
- D. Centrifugal force

Correct answer: B

11. Manometers are used to measure:

- A. Temperature
- B. Pressure
- C. Velocity
- D. Flow rate

Correct answer: B

12. U-tube manometer measures:

- A. High pressure only
- B. Differential pressure
- C. Velocity
- D. Density

Correct answer: B

13. Objective of size reduction is to:

- A. Increase particle size

- B. Decrease surface area
- C. Increase surface area
- D. Increase density

Correct answer: C

14. Size reduction is also called:

- A. Separation
- B. Comminution
- C. Screening
- D. Filtration

Correct answer: B

15. Mechanism involved in size reduction includes:

- A. Compression
- B. Impact
- C. Attrition
- D. All of the above

Correct answer: D

16. Rittinger's law is applicable to:

- A. Coarse grinding
- B. Fine grinding
- C. Crushing only
- D. Cutting

Correct answer: B

17. Kick's law is applicable to:

- A. Fine grinding
- B. Coarse grinding
- C. Ultrafine grinding
- D. Colloidal grinding

Correct answer: B

18. Hammer mill works on principle of:

- A. Compression
- B. Impact
- C. Attrition
- D. Cutting

Correct answer: B

19. Ball mill is suitable for:

- A. Sticky materials
- B. Hard materials

- C. Fibrous materials
- D. Soft materials only

Correct answer: B

20. Fluid energy mill produces particles in range of:

- A. mm
- B. cm
- C. Microns
- D. Inches

Correct answer: C

21. Edge runner mill works mainly by:

- A. Cutting
- B. Impact
- C. Compression and attrition
- D. Shearing

Correct answer: C

22. Objective of size separation is to obtain:

- A. Uniform particle size
- B. Larger particles
- C. Smaller particles
- D. Mixed particles

Correct answer: A

23. Sieving is a method of:

- A. Size reduction
- B. Size separation
- C. Mixing
- D. Filtration

Correct answer: B

24. Official standards of powders are given in:

- A. BP
- B. USP
- C. IP
- D. All of the above

Correct answer: D

25. Cyclone separator works on principle of:

- A. Gravity
- B. Filtration
- C. Centrifugal force
- D. Magnetic force

Correct answer: C

26. Air separator separates particles based on:

- A. Size only
- B. Density
- C. Air velocity
- D. All of the above

Correct answer: D

27. Bag filter is mainly used for:

- A. Liquids
- B. Gases
- C. Solids
- D. Vapors

Correct answer: B

28. Elutriation tank separates particles using:

- A. Water flow
- B. Air flow
- C. Centrifugal force
- D. Magnetic force

Correct answer: A

29. Sieve shaker improves:

- A. Filtration
- B. Mixing
- C. Sieving efficiency
- D. Drying

Correct answer: C

30. Major limitation of sieving is:

- A. High cost
- B. Time consuming
- C. Clogging of sieves
- D. Low efficiency

Correct answer: C

31. Heat transfer occurs due to:

- A. Temperature difference
- B. Pressure difference
- C. Density difference
- D. Volume difference

Correct answer: A

32. Fourier's law relates to:

- A. Convection
- B. Radiation
- C. Conduction
- D. Evaporation

Correct answer: C

33. Heat transfer by convection involves:

- A. Solids only
- B. Fluids only
- C. Radiation waves
- D. Vacuum

Correct answer: B

34. Radiation does not require:

- A. Medium
- B. Temperature
- C. Surface
- D. Energy

Correct answer: A

35. Heat exchangers are used to:

- A. Mix fluids
- B. Transfer heat
- C. Separate solids
- D. Reduce size

Correct answer: B

36. Steam jacketed kettle is used for:

- A. Distillation
- B. Drying
- C. Evaporation
- D. Filtration

Correct answer: C

37. Evaporation is removal of:

- A. Solvent as vapor
- B. Solute
- C. Solid
- D. Gas

Correct answer: A

38. Evaporation is different from boiling because:

- A. Occurs at lower temperature
- B. Requires pressure
- C. Produces foam
- D. Occurs rapidly

Correct answer: A

39. Factors affecting evaporation include:

- A. Temperature
- B. Surface area
- C. Pressure
- D. All of the above

Correct answer: D

40. Climbing film evaporator is suitable for:

- A. Heat sensitive materials
- B. High viscosity liquids
- C. Solids only
- D. Suspensions

Correct answer: A

41. Forced circulation evaporator prevents:

- A. Foaming
- B. Scaling
- C. Overheating
- D. All of the above

Correct answer: D

42. Multiple effect evaporator improves:

- A. Capacity
- B. Economy
- C. Pressure

D. Density

Correct answer: B

43. Economy of evaporator is ratio of:

- A. Steam used to solvent removed
- B. Solvent evaporated to steam used
- C. Heat supplied to heat lost
- D. Pressure to temperature

Correct answer: B

44. Simple distillation is used when boiling point difference is:

- A. Small
- B. Less than 10°C
- C. Large
- D. Zero

Correct answer: C

45. Fractional distillation is used for:

- A. Close boiling liquids
- B. Solids
- C. Immiscible liquids
- D. Gases

Correct answer: A

46. Distillation under reduced pressure is used for:

- A. Volatile liquids
- B. Thermolabile substances
- C. Gases
- D. Solids

Correct answer: B

47. Steam distillation is suitable for compounds:

- A. Soluble in water
- B. Immiscible with water
- C. High melting
- D. Ionic

Correct answer: B

48. Molecular distillation is carried out at:

- A. Atmospheric pressure

- B. High pressure
- C. Very low pressure
- D. Critical pressure

Correct answer: C

49. Flash distillation involves:

- A. Partial vaporization
- B. Total condensation
- C. Fractionation
- D. Crystallization

Correct answer: A

50. Distillation is based on difference in:

- A. Density
- B. Solubility
- C. Boiling point
- D. Viscosity

Correct answer: C

51. Heat exchanger with fluids flowing in opposite direction is:

- A. Parallel flow
- B. Counter current
- C. Cross flow
- D. Mixed flow

Correct answer: B

52. Latent heat is heat required for:

- A. Temperature change
- B. Phase change
- C. Mixing
- D. Reaction

Correct answer: B

53. Overall heat transfer coefficient depends on:

- A. Fluid properties
- B. Surface area
- C. Fouling
- D. All of the above

Correct answer: D

54. Natural convection occurs due to:

- A. Pump

- B. Fan
- C. Density difference
- D. Agitation

Correct answer: C

55. Forced convection requires:

- A. Gravity
- B. Mechanical aid
- C. Radiation
- D. Vacuum

Correct answer: B

56. Heat transfer rate increases with:

- A. Lower temperature difference
- B. Higher temperature difference
- C. Lower area
- D. Higher viscosity

Correct answer: B

57. Radiation heat transfer follows:

- A. Boyle's law
- B. Stefan–Boltzmann law
- C. Newton's law
- D. Fick's law

Correct answer: B

58. Evaporation under vacuum:

- A. Raises boiling point
- B. Lowers boiling point
- C. Has no effect
- D. Prevents evaporation

Correct answer: B

59. Distillate is:

- A. Residue
- B. Condensed vapor
- C. Feed
- D. Sludge

Correct answer: B

60. Still is an apparatus used for:

- A. Filtration
- B. Distillation
- C. Evaporation

D. Drying

Correct answer: B

61. Drying is removal of:

- A. Solids
- B. Liquids
- C. Moisture
- D. Gases

Correct answer: C

62. Drying rate curve has:

- A. One period
- B. Two periods
- C. Three periods
- D. Four periods

Correct answer: B

63. Constant rate period depends on:

- A. Internal diffusion
- B. External conditions
- C. Particle size
- D. Porosity

Correct answer: B

64. Falling rate period depends on:

- A. External conditions
- B. Internal diffusion
- C. Air velocity
- D. Humidity

Correct answer: B

65. Tray dryer uses:

- A. Vacuum
- B. Hot air
- C. Radiation
- D. Steam

Correct answer: B

66. Spray dryer is suitable for:

- A. Pastes
- B. Solutions
- C. Solids
- D. Semisolids

Correct answer: B

67. Fluidized bed dryer provides:

- A. Slow drying
- B. Uniform drying
- C. No mixing
- D. Poor heat transfer

Correct answer: B

68. Freeze drying is also called:

- A. Sublimation drying
- B. Vacuum drying
- C. Radiation drying
- D. Spray drying

Correct answer: A

69. Vacuum dryer is suitable for:

- A. Heat sensitive drugs
- B. High melting solids
- C. Metals
- D. Glass

Correct answer: A

70. Objective of mixing is to achieve:

- A. Segregation
- B. Homogeneity
- C. Size reduction
- D. Drying

Correct answer: B

71. Solid mixing mechanisms include:

- A. Diffusion
- B. Convection
- C. Shear
- D. All of the above

Correct answer: D

72. Double cone blender is used for:

- A. Liquid mixing
- B. Solid mixing
- C. Semisolids
- D. Emulsions

Correct answer: B

73. Ribbon blender is suitable for:

- A. Free flowing powders

- B. Wet masses
- C. Liquids
- D. Gases

Correct answer: A

74. Sigma blade mixer is used for:

- A. Powders
- B. Liquids
- C. Semisolids
- D. Gases

Correct answer: C

75. Planetary mixer provides:

- A. Low shear
- B. High shear
- C. No shear
- D. No mixing

Correct answer: B

76. Propeller mixer is used for:

- A. High viscosity liquids
- B. Low viscosity liquids
- C. Solids
- D. Pastes

Correct answer: B

77. Turbine mixer provides:

- A. Radial flow
- B. Axial flow
- C. No flow
- D. Laminar flow only

Correct answer: A

78. Paddle mixer is suitable for:

- A. Viscous liquids
- B. Low viscosity liquids
- C. Solids only
- D. Gases

Correct answer: A

79. Silverson emulsifier is used for:

- A. Mixing solids
- B. Emulsification
- C. Filtration

- D. Drying

Correct answer: B

80. Mixing efficiency depends on:

- A. Time
- B. Speed
- C. Design
- D. All of the above

Correct answer: D

86. Filtration separates solids from:

- A. Solids
- B. Liquids
- C. Gases
- D. Vapors

Correct answer: B

87. Filtration is driven by:

- A. Pressure difference
- B. Density difference
- C. Temperature
- D. Velocity

Correct answer: A

88. Filter aid improves:

- A. Filtrate clarity
- B. Flow rate
- C. Both A and B
- D. Density

Correct answer: C

89. Plate and frame filter is:

- A. Continuous
- B. Batch
- C. Semi continuous
- D. Automatic

Correct answer: B

90. Rotary drum filter is:

- A. Batch
- B. Continuous
- C. Manual
- D. Discontinuous

Correct answer: B

91. Cartridge filter is mainly used for:

- A. Clarification
- B. Sterilization
- C. Drying
- D. Distillation

Correct answer: A

92. Membrane filters separate based on:

- A. Density
- B. Size
- C. Charge
- D. Solubility

Correct answer: B

93. Seitz filter is used for:

- A. Air filtration
- B. Liquid filtration
- C. Gas filtration
- D. Solid separation

Correct answer: B

94. Centrifugation uses:

- A. Gravity
- B. Magnetic force
- C. Centrifugal force
- D. Electric force

Correct answer: C

95. Centrifugation is faster than filtration because:

- A. Higher force
- B. Smaller particles
- C. Higher temperature
- D. Less viscosity

Correct answer: A

96. Perforated basket centrifuge is used for:

- A. Crystals
- B. Slurries
- C. Emulsions
- D. Gases

Correct answer: B

97. Non-perforated basket centrifuge is also called:

- A. Solid bowl centrifuge
- B. Filter centrifuge
- C. Decanter centrifuge
- D. Basket dryer

Correct answer: C

98. Super centrifuge is used for separation of:

- A. Coarse particles
- B. Fine colloids
- C. Large solids
- D. Crystals

Correct answer: B

99. Semi-continuous centrifuge combines:

- A. Batch and continuous operation
- B. Two batch operations
- C. Two continuous operations
- D. Filtration and drying

Correct answer: A

100. Clarification by centrifugation removes:

- A. Dissolved solids
- B. Suspended solids
- C. Gases
- D. Vapors

Correct answer: B

101. Efficiency of centrifuge depends on:

- A. Speed
- B. Radius
- C. Density difference
- D. All of the above

Correct answer: D

102. Centrifugation is preferred over filtration when:

- A. Particles are very fine
- B. Pressure is low

- C. Temperature is high
- D. Viscosity is low

Correct answer: A

103. Cake washing is easier in:

- A. Centrifuge
- B. Filter press
- C. Vacuum filter
- D. Bag filter

Correct answer: A

104. Filtration theory includes:

- A. Darcy's law
- B. Poiseuille's law
- C. Fick's law
- D. Raoult's law

Correct answer: A

105. Filter media selection depends on:

- A. Particle size
- B. Chemical compatibility
- C. Temperature
- D. All of the above

Correct answer: D

106. Material of construction should be:

- A. Reactive
- B. Toxic
- C. Corrosion resistant
- D. Brittle

Correct answer: C

107. Ferrous metals contain:

- A. Aluminum
- B. Copper
- C. Iron
- D. Zinc

Correct answer: C

108. Stainless steel is preferred because of:

- A. Low cost
- B. High corrosion resistance
- C. Brittleness

- D. Poor strength

Correct answer: B

109. Non-ferrous metals include:

- A. Iron
- B. Steel
- C. Aluminum
- D. Cast iron

Correct answer: C

110. Corrosion is:

- A. Physical damage
- B. Chemical deterioration
- C. Mechanical wear
- D. Thermal expansion

Correct answer: B

111. Electrochemical theory explains corrosion in:

- A. Dry air
- B. Vacuum
- C. Presence of electrolyte
- D. High temperature

Correct answer: C

112. Galvanic corrosion occurs due to:

- A. Same metals
- B. Different metals
- C. Insulators
- D. Plastics

Correct answer: B

113. Pitting corrosion is:

- A. Uniform
- B. Localized
- C. Surface wide
- D. Protective

Correct answer: B

114. Corrosion prevention includes:

- A. Coating
- B. Cathodic protection
- C. Material selection

D. All of the above

Correct answer: D

C. Productivity

D. All of the above

Correct answer: D

115. Organic non-metals include:

A. Glass

B. Rubber

C. Steel

D. Copper

Correct answer: B

116. Inorganic non-metals include:

A. Plastics

B. Rubber

C. Glass

D. Nylon

Correct answer: C

117. Cathodic protection prevents corrosion by:

A. Making metal anode

B. Making metal cathode

C. Increasing oxidation

D. Removing coating

Correct answer: B

118. Material handling systems are used to:

A. Transport materials

B. Store materials

C. Control materials

D. All of the above

Correct answer: D

119. Pneumatic conveying uses:

A. Water

B. Air

C. Steam

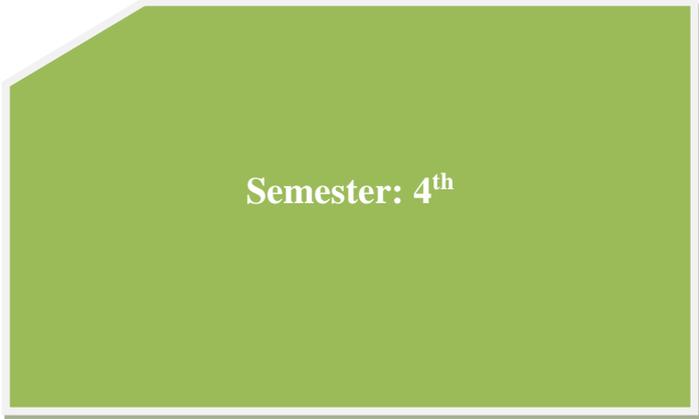
D. Oil

Correct answer: B

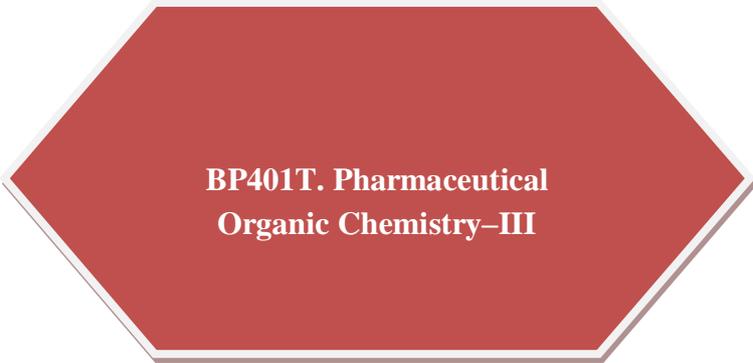
120. Proper material handling improves:

A. Safety

B. Efficiency



Semester: 4th



**BP401T. Pharmaceutical
Organic Chemistry-III**

1. Optical isomerism arises due to the presence of:

- A. Double bond
- B. Plane of symmetry
- C. Asymmetric carbon
- D. Aromatic ring

Answer: C

2. A molecule that is non-superimposable on its mirror image is called:

- A. Achiral
- B. Diastereomer
- C. Enantiomer
- D. Meso

Answer: C

3. Optical activity is measured using:

- A. UV spectrophotometer
- B. Polarimeter
- C. Colorimeter
- D. Refractometer

Answer: B

4. Which of the following is optically inactive despite having chiral centers?

- A. Tartaric acid
- B. Meso-tartaric acid
- C. Lactic acid
- D. Glyceraldehyde

Answer: B

5. Enantiomers differ in:

- A. Melting point
- B. Solubility
- C. Optical rotation
- D. Chemical reactivity

Answer: C

6. Diastereomers differ in:

- A. Optical rotation only
- B. All physical properties
- C. Molecular formula

D. Functional groups

Answer: B

7. Which element of symmetry causes optical inactivity?

- A. Center of symmetry
- B. Axis of rotation
- C. Chiral center
- D. Asymmetric carbon

Answer: A

8. A chiral molecule must lack:

- A. Carbon atom
- B. Functional group
- C. Plane of symmetry
- D. Double bond

Answer: C

9. DL system of nomenclature is based on:

- A. Optical rotation
- B. Configuration relative to glyceraldehyde
- C. Absolute configuration
- D. Priority rules

Answer: B

10. RS system of nomenclature is based on:

- A. Optical rotation
- B. DL system
- C. Cahn–Ingold–Prelog rules
- D. Functional groups

Answer: C

11. In RS system, highest priority is given to atom with:

- A. Lowest atomic number
- B. Highest atomic number
- C. Highest mass
- D. Lowest mass

Answer: B

12. Racemic mixture contains:

- A. Only D-isomer
- B. Only L-isomer
- C. Equal amount of enantiomers
- D. Diastereomers

Answer: C

13. Racemic mixtures are optically:

- A. Active
- B. Inactive
- C. Levorotatory
- D. Dextrorotatory

Answer: B

14. Resolution of racemic mixture involves:

- A. Oxidation
- B. Reduction
- C. Separation of enantiomers
- D. Isomerization

Answer: C

15. Which method is used for resolution of racemates?

- A. Distillation
- B. Crystallization with chiral reagent
- C. Filtration
- D. Sublimation

Answer: B

16. Asymmetric synthesis produces:

- A. Racemic mixture
- B. Single enantiomer
- C. Diastereomers
- D. Meso compound

Answer: B

17. Partial asymmetric synthesis gives:

- A. 100% enantiomer
- B. Racemate
- C. Excess of one enantiomer
- D. Only meso form

Answer: C

18. Absolute asymmetric synthesis produces:

- A. Racemic mixture
- B. Single enantiomer without chiral influence
- C. Diastereomers
- D. Optical inactivity

Answer: B

19. Chiral molecules rotate plane polarized light because:

- A. They absorb light
- B. They refract light
- C. They interact asymmetrically with light
- D. They emit light

Answer: C

20. Which compound shows optical activity?

- A. Methane
- B. Ethanol
- C. 2-Butanol
- D. Acetone

Answer: C

21. Meso compounds are optically inactive due to:

- A. Lack of chiral center
- B. External compensation
- C. Internal compensation
- D. Racemization

Answer: C

22. Resolution using enzymes is called:

- A. Chemical resolution
- B. Mechanical resolution
- C. Biochemical resolution
- D. Physical resolution

Answer: C

23. Which reaction retains configuration?

- A. SN1
- B. SN2

- C. Racemization
- D. Rearrangement

Answer: B

24. Optical purity is measured by:

- A. % yield
- B. Enantiomeric excess
- C. Melting point
- D. Boiling point

Answer: B

25. Geometrical isomerism arises due to:

- A. Free rotation
- B. Restricted rotation
- C. Chirality
- D. Aromaticity

Answer: B

26. Cis–trans nomenclature is applicable to:

- A. Alkanes
- B. Alkynes
- C. Alkenes
- D. Aromatics

Answer: C

27. E–Z nomenclature is based on:

- A. Molecular weight
- B. Optical activity
- C. Priority rules
- D. Hybridization

Answer: C

28. Cis-isomer generally has:

- A. Lower boiling point
- B. Higher boiling point
- C. Same boiling point
- D. No boiling point

Answer: B

29. Trans isomer is usually:

- A. More polar
- B. Less polar

- C. Ionic
- D. Optically active

Answer: B

30. Configuration of geometrical isomers is determined by:

- A. UV spectroscopy
- B. IR spectroscopy
- C. Chemical reactions
- D. All of the above

Answer: D

31. Conformational isomers differ by:

- A. Bond breaking
- B. Bond rotation
- C. Functional group change
- D. Molecular formula

Answer: B

32. Most stable conformation of ethane is:

- A. Eclipsed
- B. Staggered
- C. Cis
- D. Trans

Answer: B

33. Anti-conformation of n-butane is:

- A. Least stable
- B. Most stable
- C. Eclipsed
- D. Gauche

Answer: B

34. Gauche conformation is less stable due to:

- A. Hydrogen bonding
- B. Steric strain
- C. Dipole moment
- D. Ring strain

Answer: B

35. Chair conformation of cyclohexane is:

- A. Least stable
- B. Most stable
- C. Planar
- D. Aromatic

Answer: B

36. Boat conformation is unstable due to:

- A. Angle strain
- B. Torsional strain
- C. Steric repulsion
- D. All of the above

Answer: D

37. Axial bonds in cyclohexane are:

- A. Equatorial
- B. Parallel to ring axis
- C. Planar
- D. Aromatic

Answer: B

38. Atropisomerism is observed in:

- A. Alkanes
- B. Biphenyls
- C. Alkenes
- D. Alkynes

Answer: B

39. Biphenyl shows optical activity when:

- A. Rings are coplanar
- B. Rotation is restricted
- C. No substituents present
- D. Molecule is symmetrical

Answer: B

40. Stereospecific reactions produce:

- A. Same product always
- B. Different stereoisomers from different substrates
- C. Racemic mixture
- D. Rearranged products

Answer: B

41. Stereoselective reactions produce:

- A. One major stereoisomer
- B. Equal mixture
- C. Only meso form
- D. Only racemate

Answer: A

42. Cis–trans isomerism is not possible in:

- A. But-2-ene
- B. Propene
- C. Cyclohexene
- D. Maleic acid

Answer: B

43. E-isomer is generally:

- A. Less stable
- B. More stable
- C. Same stability
- D. Optically active

Answer: B

44. Newman projection is used to represent:

- A. Structural isomerism
- B. Conformational isomerism
- C. Optical isomerism
- D. Geometrical isomerism

Answer: B

45. Cyclohexane has how many chair conformations?

- A. One
- B. Two
- C. Three
- D. Four

Answer: B

46. Ring flip interconverts:

- A. Cis–trans
- B. Axial–equatorial
- C. Enantiomers
- D. Diastereomers

Answer: B

47. Conformational isomers are also called:

- A. Rotamers
- B. Enantiomers
- C. Tautomers
- D. Epimers

Answer: A

48. Which is most stable cyclohexane conformation?

- A. Boat
- B. Half-chair
- C. Chair
- D. Twist-boat

Answer: C

49. Heterocyclic compounds contain:

- A. Only carbon
- B. Only hydrogen
- C. One or more hetero atoms
- D. Only nitrogen

Answer: C

50. Pyrrole contains:

- A. Oxygen
- B. Sulphur
- C. Nitrogen
- D. Phosphorus

Answer: C

51. Furan contains:

- A. Nitrogen
- B. Oxygen
- C. Sulphur
- D. Chlorine

Answer: B

52. Thiophene contains:

- A. Oxygen
- B. Nitrogen
- C. Sulphur
- D. Phosphorus

Answer: C

53. Aromaticity of heterocycles is due to:

- A. Sigma electrons
- B. Lone pair participation
- C. Hydrogen bonding
- D. Ring strain

Answer: B

54. Order of aromaticity is:

- A. Pyrrole > Furan > Thiophene
- B. Thiophene > Pyrrole > Furan
- C. Furan > Pyrrole > Thiophene
- D. Pyrrole > Thiophene > Furan

Answer: B

55. Pyrrole is:

- A. Basic
- B. Neutral
- C. Weakly acidic
- D. Strongly basic

Answer: C

56. Electrophilic substitution in pyrrole occurs at:

- A. Alpha position
- B. Beta position
- C. Nitrogen
- D. Gamma position

Answer: A

57. Furan is less aromatic than thiophene due to:

- A. High electronegativity of oxygen
- B. Ring strain
- C. Steric hindrance
- D. Larger size

Answer: A

58. Pyrrole is used in synthesis of:

- A. Chlorophyll
- B. Penicillin
- C. Aspirin
- D. Paracetamol

Answer: A

59. Furan derivatives are used in:

- A. Antibiotics
- B. Vitamins
- C. Antiseptics
- D. Analgesics

Answer: B

60. Thiophene is used as:

- A. Solvent
- B. Fuel additive
- C. Drug intermediate
- D. Preservative

Answer: C

61. Heterocyclic rings show:

- A. Aliphatic reactions
- B. Aromatic reactions
- C. Radical reactions
- D. No reactions

Answer: B

62. Pyrrole does not show basicity because:

- A. Lone pair is involved in aromaticity
- B. Nitrogen is sp^2
- C. Hydrogen bonding
- D. Steric effect

Answer: A

63. Electrophilic substitution is fastest in:

- A. Benzene
- B. Thiophene
- C. Furan
- D. Pyrrole

Answer: D

64. Heterocycles are important in:

- A. Dyes
- B. Drugs
- C. Vitamins
- D. All of the above

Answer: D

65. Which heterocycle is most reactive?

- A. Benzene
- B. Thiophene
- C. Pyrrole
- D. Furan

Answer: C

66. Pyrrole undergoes nitration under:

- A. Strong acidic conditions
- B. Mild conditions
- C. Alkaline conditions
- D. Radical conditions

Answer: B

67. Thiophene resembles benzene due to:

- A. Size
- B. Aromaticity
- C. Basicity
- D. Solubility

Answer: B

68. Five-membered heterocycles obey:

- A. Huckel's rule
- B. Markovnikov rule
- C. Saytzeff rule
- D. Baeyer rule

Answer: A

69. Lone pair on hetero atom contributes:

- A. 1 electron
- B. 2 electrons
- C. 3 electrons
- D. 4 electrons

Answer: B

70. Pyrrole has how many pi electrons?

- A. 4
- B. 6
- C. 8
- D. 10

Answer: B

71. Furan is less stable due to:

- A. Oxygen electronegativity
- B. Ring strain
- C. Hydrogen bonding
- D. Lack of resonance

Answer: A

72. Thiophene is used in synthesis of:

- A. Sulfa drugs
- B. Penicillin
- C. Insulin
- D. Heparin

Answer: A

73. Pyridine is:

- A. Basic
- B. Acidic
- C. Neutral
- D. Amphoteric

Answer: A

74. Basicity of pyridine is due to:

- A. Lone pair on nitrogen
- B. Aromaticity
- C. Resonance
- D. Hydrogen bonding

Answer: A

75. Pyridine resembles:

- A. Cyclohexane
- B. Benzene
- C. Pyrrole
- D. Thiophene

Answer: B

76. Quinoline is:

- A. Five-membered
- B. Six-membered
- C. Fused ring system
- D. Aliphatic

Answer: C

77. Isoquinoline differs from quinoline by:

- A. Molecular formula
- B. Position of nitrogen
- C. Aromaticity
- D. Basicity

Answer: B

78. Indole contains:

- A. One nitrogen
- B. Two nitrogen
- C. Oxygen
- D. Sulphur

Answer: A

79. Indole is found in:

- A. Vitamins
- B. Amino acids
- C. Hormones
- D. Alkaloids

Answer: D

80. Acridine is used as:

- A. Antiseptic
- B. Dye
- C. Antimalarial
- D. All of the above

Answer: D

81. Pyrazole contains:

- A. One nitrogen
- B. Two nitrogen
- C. Oxygen
- D. Sulphur

Answer: B

82. Imidazole is present in:

- A. Histidine
- B. Alanine
- C. Glycine
- D. Valine

Answer: A

83. Oxazole contains:

- A. N and O
- B. N and S

C. O and S
D. Only N
Answer: A

84. Thiazole contains:

A. N and O
B. N and S
C. O and S
D. Only S
Answer: B

85. Purine is a component of:

A. DNA
B. RNA
C. ATP
D. All of the above
Answer: D

86. Pyrimidine bases include:

A. Adenine
B. Guanine
C. Cytosine
D. Hypoxanthine
Answer: C

87. Azepines are:

A. Five-membered
B. Six-membered
C. Seven-membered
D. Eight-membered
Answer: C

88. Quinoline is prepared by:

A. Skraup synthesis
B. Friedel–Crafts
C. Wurtz reaction
D. Sandmeyer reaction
Answer: A

89. Pyridine undergoes electrophilic substitution at:

A. Ortho
B. Meta
C. Para

D. Beta position
Answer: D

90. Basicity of pyridine is lower than aliphatic amines due to:

A. Aromaticity
B. Lone pair involvement
C. Hybridization
D. Steric hindrance
Answer: C

91. Indole is:

A. Basic
B. Acidic
C. Neutral
D. Amphoteric
Answer: C

92. Imidazole is:

A. Strongly acidic
B. Neutral
C. Amphoteric
D. Non-aromatic
Answer: C

93. Heterocycles are important pharmacologically because:

A. Stability
B. Reactivity
C. Biological activity
D. Color
Answer: C

94. Pyrimidine synthesis occurs in:

A. Liver
B. Cytosol
C. Mitochondria
D. Ribosome
Answer: B

95. Indole nucleus is present in:

A. Tryptophan
B. Tyrosine
C. Phenylalanine

D. Histidine

Answer: A

96. Acridine derivatives are used in:

- A. Cancer therapy
- B. Antimalarial drugs
- C. Antiseptics
- D. All of the above

Answer: D

97. NaBH_4 is used for reduction of:

- A. Aldehydes and ketones
- B. Carboxylic acids
- C. Esters
- D. Amides

Answer: A

98. LiAlH_4 is stronger reducing agent than NaBH_4 because:

- A. Higher molecular weight
- B. More reactive hydride
- C. Aromaticity
- D. Solubility

Answer: B

99. Clemmensen reduction uses:

- A. Zn-Hg / HCl
- B. NH_2NH_2 / KOH
- C. Na / NH_3
- D. Pd / C

Answer: A

100. Wolff-Kishner reduction occurs in:

- A. Acidic medium
- B. Neutral medium
- C. Basic medium
- D. Alcoholic medium

Answer: C

101. Birch reduction reduces:

- A. Aldehydes
- B. Ketones
- C. Aromatic rings

D. Esters

Answer: C

102. Birch reduction uses:

- A. Na / NH_3
- B. Zn / HCl
- C. LiAlH_4
- D. Pd / H_2

Answer: A

103. Oppenauer oxidation converts:

- A. Alcohol \rightarrow Ketone
- B. Aldehyde \rightarrow Acid
- C. Ketone \rightarrow Alcohol
- D. Acid \rightarrow Ester

Answer: A

104. Oppenauer oxidation is reverse of:

- A. Clemmensen
- B. Birch
- C. Meerwein-Ponndorf-Verley
- D. Wolff-Kishner

Answer: C

105. Dakin reaction involves:

- A. Oxidation of aldehydes
- B. Reduction of ketones
- C. Rearrangement of phenolic aldehydes
- D. Hydrolysis

Answer: C

106. Beckmann rearrangement converts:

- A. Aldoxime \rightarrow Amide
- B. Ketoxime \rightarrow Amide
- C. Ketone \rightarrow Alcohol
- D. Acid \rightarrow Ester

Answer: B

107. Schmidt rearrangement uses:

- A. Hydrazoic acid
- B. Hydroxylamine
- C. Ammonia

D. Nitrous acid

Answer: A

108. Claisen–Schmidt condensation

occurs between:

- A. Two ketones
- B. Two aldehydes
- C. Aldehyde and ketone
- D. Ester and ketone

Answer: C

109. Claisen–Schmidt condensation

forms:

- A. β -diketone
- B. α,β -unsaturated ketone
- C. Ester
- D. Acid

Answer: B

110. Metal hydride reductions are:

- A. Acid catalyzed
- B. Base catalyzed
- C. Nucleophilic
- D. Radical

Answer: C

111. NaBH_4 does not reduce:

- A. Aldehydes
- B. Ketones
- C. Esters
- D. Acid chlorides

Answer: C

112. Wolff–Kishner reduction requires:

- A. Acid
- B. Base and heat
- C. Light
- D. Catalyst

Answer: B

113. Clemmensen reduction is preferred

for:

- A. Acid sensitive compounds
- B. Base sensitive compounds

C. Neutral compounds

D. Aromatic compounds

Answer: B

114. Birch reduction gives:

- A. Fully reduced ring
- B. Partially reduced ring
- C. Oxidized ring
- D. Ring cleavage

Answer: B

115. Beckmann rearrangement migratory aptitude is:

- A. $\text{H} > \text{Alkyl} > \text{Aryl}$
- B. $\text{Aryl} > \text{Alkyl} > \text{H}$
- C. $\text{Alkyl} > \text{H} > \text{Aryl}$
- D. $\text{H} > \text{Aryl} > \text{Alkyl}$

Answer: A

116. Schmidt reaction converts carboxylic acids to:

- A. Alcohols
- B. Esters
- C. Amides
- D. Ketones

Answer: C

117. Claisen–Schmidt reaction is also called:

- A. Aldol condensation
- B. Crossed aldol condensation
- C. Cannizzaro reaction
- D. Perkin reaction

Answer: B

118. Dakin reaction requires:

- A. Acidic medium
- B. Alkaline hydrogen peroxide
- C. Metal catalyst
- D. Light

Answer: B

119. Reduction of carbonyl to methylene is achieved by:

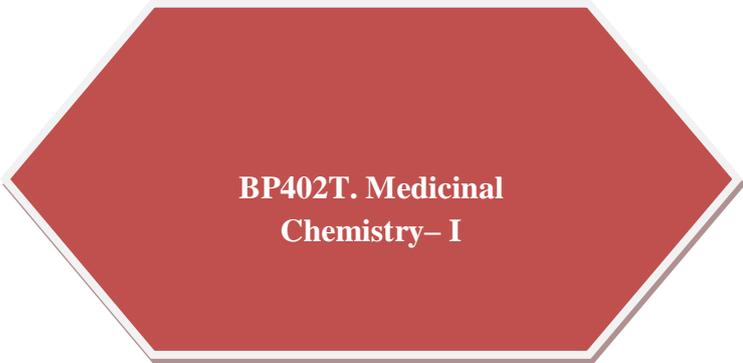
- A. Birch
- B. Clemmensen
- C. Oppenauer
- D. Dakin

Answer: B

120. Synthetic rearrangements are useful in:

- A. Drug synthesis
- B. Structural modification
- C. Industrial chemistry
- D. All of the above

Answer: D



**BP402T. Medicinal
Chemistry- I**

1. Medicinal chemistry mainly deals with:

- A. Drug manufacturing
- B. Drug design and development
- C. Drug dispensing
- D. Drug legislation

Answer: B

2. Medicinal chemistry evolved mainly after the development of:

- A. Organic chemistry
- B. Pharmacognosy
- C. Synthetic drugs
- D. Biochemistry

Answer: C

3. The relationship between chemical structure and biological activity is known as:

- A. SAR
- B. QSAR
- C. ADME
- D. Pharmacokinetics

Answer: A

4. Ionization of a drug depends mainly on:

- A. Molecular weight
- B. pKa and pH
- C. Solubility
- D. Partition coefficient

Answer: B

5. Unionized form of a drug is important for:

- A. Solubility
- B. Protein binding
- C. Membrane permeation
- D. Metabolism

Answer: C

6. Partition coefficient determines:

- A. Drug metabolism
- B. Lipophilicity

- C. Protein binding
- D. Toxicity

Answer: B

7. Hydrogen bonding in drugs mainly affects:

- A. Molecular weight
- B. Solubility and receptor binding
- C. Color
- D. Stability

Answer: B

8. Protein binding of drugs mainly occurs with:

- A. Hemoglobin
- B. Albumin
- C. Globulin
- D. Fibrinogen

Answer: B

9. Highly protein-bound drugs show:

- A. Rapid action
- B. Short duration
- C. Prolonged action
- D. No action

Answer: C

10. Chelation improves drug action by:

- A. Increasing toxicity
- B. Reducing solubility
- C. Increasing stability
- D. Decreasing bioavailability

Answer: C

11. Bioisosterism is used to:

- A. Increase toxicity
- B. Modify pharmacological activity
- C. Reduce shelf life
- D. Increase metabolism

Answer: B

12. Optical isomerism influences:

- A. Drug color
- B. Drug stability

- C. Pharmacological activity
- D. Molecular weight

Answer: C

13. One enantiomer is usually:

- A. Inactive
- B. More potent
- C. Toxic
- D. Insoluble

Answer: B

14. Phase-I metabolism mainly involves:

- A. Conjugation
- B. Oxidation, reduction, hydrolysis
- C. Sulfation
- D. Glucuronidation

Answer: B

15. Phase-II metabolism mainly involves:

- A. Oxidation
- B. Reduction
- C. Conjugation reactions
- D. Hydrolysis

Answer: C

16. Cytochrome P450 enzymes are involved in:

- A. Phase-II metabolism
- B. Drug absorption
- C. Phase-I metabolism
- D. Drug excretion

Answer: C

17. First-pass metabolism occurs in:

- A. Kidney
- B. Liver
- C. Lung
- D. Brain

Answer: B

18. Stereochemistry affects drug metabolism by:

- A. Changing color

- B. Altering enzyme interaction
- C. Changing pH
- D. Increasing solubility

Answer: B

19. Prodrugs are designed to:

- A. Increase toxicity
- B. Improve bioavailability
- C. Decrease stability
- D. Increase metabolism

Answer: B

20. Lipophilic drugs are generally:

- A. Rapidly excreted
- B. Poorly absorbed
- C. Slowly eliminated
- D. Inactive

Answer: C

21. Water-soluble drugs are eliminated mainly by:

- A. Liver
- B. Lung
- C. Kidney
- D. Skin

Answer: C

22. Plasma half-life depends on:

- A. Dose
- B. Route
- C. Clearance and volume of distribution
- D. Color

Answer: C

23. Drug metabolism usually:

- A. Activates drugs
- B. Inactivates drugs
- C. Increases toxicity
- D. Prevents absorption

Answer: B

24. Enzyme induction results in:

- A. Decreased metabolism
- B. Increased metabolism

- C. No effect
- D. Enzyme inhibition

Answer: B

25. Catecholamines include:

- A. Dopamine
- B. Epinephrine
- C. Norepinephrine
- D. All of the above

Answer: D

26. Biosynthesis of catecholamines starts from:

- A. Tyrosine
- B. Tryptophan
- C. Phenylalanine
- D. Histidine

Answer: A

27. Alpha-1 receptors mainly cause:

- A. Bronchodilation
- B. Vasoconstriction
- C. Bradycardia
- D. Sedation

Answer: B

28. Beta-1 receptors are mainly present in:

- A. Lungs
- B. Heart
- C. Liver
- D. Kidney

Answer: B

29. Beta-2 receptor stimulation causes:

- A. Bronchoconstriction
- B. Bronchodilation
- C. Vasoconstriction
- D. Bradycardia

Answer: B

30. Phenylephrine is a:

- A. Alpha agonist
- B. Beta agonist

- C. Alpha blocker
- D. Beta blocker

Answer: A

31. Dopamine acts mainly on:

- A. Alpha receptors
- B. Beta receptors
- C. Dopaminergic receptors
- D. Cholinergic receptors

Answer: C

32. Methyldopa is used in:

- A. Asthma
- B. Parkinson's disease
- C. Hypertension
- D. Depression

Answer: C

33. Clonidine is a:

- A. Alpha-2 agonist
- B. Alpha-1 blocker
- C. Beta-blocker
- D. Cholinergic agonist

Answer: A

34. Salbutamol is selective for:

- A. Beta-1
- B. Beta-2
- C. Alpha-1
- D. Alpha-2

Answer: B

35. Naphazoline is used as:

- A. Antidepressant
- B. Nasal decongestant
- C. Antihypertensive
- D. Antipsychotic

Answer: B

36. Ephedrine has:

- A. Direct action
- B. Indirect action
- C. Mixed action

D. No action

Answer: C

37. Pseudoephedrine is:

- A. Direct acting
- B. Indirect acting
- C. Mixed acting
- D. Beta blocker

Answer: B

38. Tolazoline is a:

- A. Alpha blocker
- B. Beta blocker
- C. Alpha agonist
- D. Beta agonist

Answer: A

39. Prazosin selectively blocks:

- A. Alpha-1 receptors
- B. Alpha-2 receptors
- C. Beta-1 receptors
- D. Beta-2 receptors

Answer: A

40. Propranolol is a:

- A. Selective beta-1 blocker
- B. Non-selective beta blocker
- C. Alpha blocker
- D. Partial agonist

Answer: B

41. Atenolol is selective for:

- A. Alpha-1
- B. Alpha-2
- C. Beta-1
- D. Beta-2

Answer: C

42. Labetalol blocks:

- A. Alpha only
- B. Beta only
- C. Alpha and beta
- D. Dopamine receptors

Answer: C

43. Carvedilol is mainly used in:

- A. Asthma
- B. Heart failure
- C. Depression
- D. Epilepsy

Answer: B

44. SAR of beta blockers requires:

- A. Catechol nucleus
- B. Aryloxypropanolamine structure
- C. Ester linkage
- D. Sulphur atom

Answer: B

45. Beta blockers reduce blood pressure by:

- A. Vasoconstriction
- B. Decreasing cardiac output
- C. Increasing heart rate
- D. Bronchoconstriction

Answer: B

46. Metoprolol is:

- A. Non-selective
- B. Beta-1 selective
- C. Alpha selective
- D. Partial agonist

Answer: B

47. Dobutamine mainly stimulates:

- A. Alpha-1
- B. Alpha-2
- C. Beta-1
- D. Beta-2

Answer: C

48. Isoproterenol is:

- A. Alpha agonist
- B. Beta agonist
- C. Alpha blocker
- D. Beta blocker

Answer: B

49. Acetylcholine is synthesized from:

- A. Choline + Acetyl-CoA
- B. Choline + Pyruvate
- C. Choline + ATP
- D. Choline + Lactate

Answer: A

50. Muscarinic receptors are present in:

- A. Skeletal muscles
- B. Smooth muscles
- C. Neuromuscular junction
- D. CNS only

Answer: B

51. Nicotinic receptors are present in:

- A. Heart
- B. Smooth muscle
- C. Autonomic ganglia
- D. Liver

Answer: C

52. Carbachol is a:

- A. Direct acting parasympathomimetic
- B. Indirect acting
- C. Anticholinergic
- D. Ganglion blocker

Answer: A

53. Bethanechol is used in:

- A. Asthma
- B. Urinary retention
- C. Hypertension
- D. Parkinsonism

Answer: B

54. Neostigmine is:

- A. Reversible cholinesterase inhibitor
- B. Irreversible inhibitor
- C. Direct agonist
- D. Antagonist

Answer: A

55. Physostigmine crosses BBB because:

- A. It is quaternary

- B. It is tertiary
- C. It is ionic
- D. It is protein bound

Answer: B

56. Organophosphates are:

- A. Reversible inhibitors
- B. Irreversible inhibitors
- C. Weak inhibitors
- D. Competitive inhibitors

Answer: B

57. Malathion is mainly used as:

- A. Drug
- B. Insecticide
- C. Antidote
- D. Antibiotic

Answer: B

58. Pralidoxime is used to:

- A. Inhibit AChE
- B. Reactivate AChE
- C. Block receptors
- D. Reduce toxicity

Answer: B

59. Atropine is a:

- A. Cholinergic agonist
- B. Cholinergic antagonist
- C. Adrenergic agonist
- D. Beta blocker

Answer: B

60. Ipratropium bromide is used in:

- A. Hypertension
- B. Asthma
- C. Parkinson's disease
- D. Epilepsy

Answer: B

61. Tropicamide is used in:

- A. Ophthalmology
- B. Cardiology
- C. Neurology

D. Psychiatry

Answer: A

62. Glycopyrrolate is:

- A. CNS active
- B. Peripherally acting
- C. Direct agonist
- D. Indirect agonist

Answer: B

63. Dicyclomine is used as:

- A. Bronchodilator
- B. Antispasmodic
- C. Antipsychotic
- D. Antidepressant

Answer: B

64. Benztropine is used in:

- A. Epilepsy
- B. Parkinson's disease
- C. Asthma
- D. Hypertension

Answer: B

65. Procyclidine is:

- A. Cholinergic agonist
- B. Anticholinergic
- C. Adrenergic blocker
- D. Beta agonist

Answer: B

66. Methantheline is a:

- A. Quaternary anticholinergic
- B. Tertiary anticholinergic
- C. Cholinesterase inhibitor
- D. Agonist

Answer: A

67. Orphenadrine is used as:

- A. Muscle relaxant
- B. Antipsychotic
- C. Antidepressant
- D. Antihypertensive

Answer: A

68. Anticholinergics cause:

- A. Miosis
- B. Bronchoconstriction
- C. Mydriasis
- D. Bradycardia

Answer: C

69. Cholinergic drugs decrease:

- A. GI motility
- B. Secretions
- C. Heart rate
- D. Urination

Answer: C

70. Acetylcholine is rapidly destroyed by:

- A. Monoamine oxidase
- B. Acetylcholinesterase
- C. Catechol-O-methyl transferase
- D. Proteases

Answer: B

71. Muscarinic receptors are G-protein coupled except:

- A. M1
- B. M2
- C. M3
- D. Nicotinic

Answer: D

72. Nicotinic receptors are:

- A. Ion channels
- B. GPCR
- C. Enzymes
- D. Transporters

Answer: A

73. Benzodiazepines act by enhancing:

- A. Dopamine
- B. Serotonin
- C. GABA
- D. Acetylcholine

Answer: C

74. Diazepam is used as:

- A. Antipsychotic
- B. Anxiolytic
- C. Analgesic
- D. Antidepressant

Answer: B

75. Barbiturates act by:

- A. Blocking sodium channels
- B. Enhancing GABA action
- C. Inhibiting dopamine
- D. Blocking calcium channels

Answer: B

76. Phenobarbital is mainly used as:

- A. Sedative
- B. Anticonvulsant
- C. Antipsychotic
- D. Antidepressant

Answer: B

77. Zolpidem is:

- A. Barbiturate
- B. Benzodiazepine
- C. Non-benzodiazepine hypnotic
- D. Opioid

Answer: C

78. Chlorpromazine belongs to:

- A. Benzodiazepines
- B. Phenothiazines
- C. Butyrophenones
- D. Benzamides

Answer: B

79. Haloperidol is a:

- A. Typical antipsychotic
- B. Atypical antipsychotic
- C. Antidepressant
- D. Sedative

Answer: A

80. Clozapine causes:

- A. EPS

- B. Agranulocytosis
- C. Parkinsonism
- D. Hypertension

Answer: B

81. Phenytoin is used in:

- A. Absence seizures
- B. Tonic-clonic seizures
- C. Myoclonic seizures
- D. Febrile seizures

Answer: B

82. Ethosuximide is drug of choice for:

- A. Tonic-clonic
- B. Absence seizures
- C. Partial seizures
- D. Status epilepticus

Answer: B

83. Carbamazepine blocks:

- A. Calcium channels
- B. Sodium channels
- C. Potassium channels
- D. Chloride channels

Answer: B

84. Valproic acid increases:

- A. Dopamine
- B. GABA levels
- C. Serotonin
- D. Acetylcholine

Answer: B

85. Halothane is:

- A. Injectable anesthetic
- B. Inhalational anesthetic
- C. Local anesthetic
- D. Dissociative anesthetic

Answer: B

86. Ketamine produces:

- A. General anesthesia
- B. Dissociative anesthesia
- C. Local anesthesia

D. Sedation only

Answer: B

87. Morphine acts mainly on:

A. κ receptors

B. δ receptors

C. μ receptors

D. σ receptors

Answer: C

88. Codeine is:

A. Strong analgesic

B. Weak analgesic

C. Antipsychotic

D. Antidepressant

Answer: B

89. Fentanyl is:

A. Weak opioid

B. Strong opioid

C. NSAID

D. Antagonist

Answer: B

90. Naloxone is used in:

A. Pain relief

B. Opioid overdose

C. Sedation

D. Anxiety

Answer: B

91. Aspirin acts by inhibiting:

A. COX enzymes

B. LOX enzymes

C. MAO

D. COMT

Answer: A

92. Ibuprofen is a:

A. Steroid

B. NSAID

C. Opioid

D. Antipyretic only

Answer: B

93. Paracetamol mainly shows:

A. Anti-inflammatory action

B. Analgesic & antipyretic action

C. Opioid action

D. Steroid action

Answer: B

94. Diclofenac is used in:

A. Depression

B. Pain and inflammation

C. Epilepsy

D. Anxiety

Answer: B

95. Phenylbutazone causes:

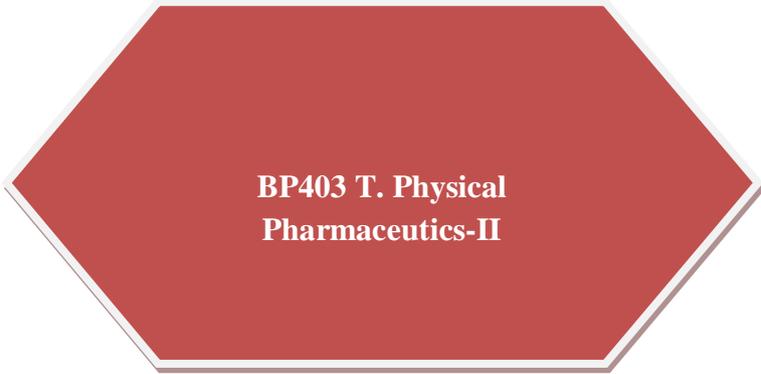
A. Agranulocytosis

B. GI irritation

C. Renal toxicity

D. All of the above

Answer: D



BP403 T. Physical
Pharmaceutics-II

- Colloidal particles generally range in size between**
 - 1–10 nm
 - 10–100 nm
 - 1 nm–1 μm
 - Above 10 μm

Correct answer: C
- A system in which gas is dispersed in a liquid is called**
 - Aerosol
 - Foam
 - Sol
 - Emulsion

Correct answer: B
- The Tyndall effect is due to**
 - Absorption of light
 - Reflection of light
 - Scattering of light by colloidal particles
 - Refraction of light

Correct answer: C
- Brownian motion in colloids is caused by**
 - Gravity
 - Electric charge
 - Collision with dispersion medium molecules
 - Particle size

Correct answer: C
- Which property prevents sedimentation in colloids?**
 - Viscosity
 - Brownian motion
 - Density
 - Surface tension

Correct answer: B
- The charge on colloidal particles is responsible for**
 - Optical properties
 - Kinetic properties
 - Electrical properties
 - Rheological properties

Correct answer: C
- Electrophoresis is movement of colloidal particles under**
 - Gravity
 - Heat
 - Electric field
 - Pressure

Correct answer: C
- Coacervation is best described as**
 - Breaking of colloids
 - Separation of phases
 - Aggregation of colloidal particles
 - Crystallization

Correct answer: C
- Peptization converts**
 - Colloid to precipitate
 - Precipitate to colloid
 - Sol to gel
 - Gel to sol

Correct answer: B
- Protective colloids primarily prevent**
 - Gel formation
 - Sedimentation
 - Coagulation
 - Peptization

Correct answer: C
- Gold number indicates**
 - Stability of colloid
 - Particle size
 - Viscosity
 - Density

Correct answer: A
- Which electrolyte has maximum coagulating power?**
 - Na^+
 - Ca^{2+}
 - Al^{3+}
 - K^+

Correct answer: C
- Lyophilic colloids are generally**
 - Irreversible
 - Reversible
 - Unstable

- D. Non-hydrated
Correct answer: B
14. **Lyophobic colloids are stabilized mainly by**
A. Hydration
B. Charge
C. Viscosity
D. Density
Correct answer: B
15. **Which is an optical property of colloids?**
A. Sedimentation
B. Electrophoresis
C. Tyndall effect
D. Diffusion
Correct answer: C
16. **Zeta potential is related to**
A. Particle size
B. Surface charge
C. Density
D. Shape
Correct answer: B
17. **Dialysis is used to remove**
A. Colloidal particles
B. Solvent
C. Electrolytes
D. Gels
Correct answer: C
18. **Ultrafiltration uses membranes with pores**
A. Larger than colloids
B. Smaller than colloids
C. Equal to colloids
D. Irregular
Correct answer: B
19. **Which is a kinetic property of colloids?**
A. Tyndall effect
B. Brownian motion
C. Zeta potential
D. Electrophoresis
Correct answer: B
20. **The dispersed phase in a sol is**
A. Liquid
B. Solid
C. Gas
D. Semi-solid
Correct answer: B
21. **Protective action is measured using**
A. Gold number
B. Zeta potential
C. Viscosity
D. pH
Correct answer: A
22. **Coagulation is promoted by**
A. Protective colloids
B. Dilution
C. Electrolytes
D. Peptizing agents
Correct answer: C
23. **Hydrophilic colloids show strong affinity for**
A. Oil
B. Air
C. Water
D. Electrolytes
Correct answer: C
24. **Which is NOT a colloidal system?**
A. Milk
B. Smoke
C. True solution
D. Gel
Correct answer: C
25. **Newton's law of flow applies to**
A. Plastic systems
B. Newtonian systems
C. Thixotropic systems
D. Pseudoplastic systems
Correct answer: B
26. **Viscosity is defined as resistance to**
A. Compression
B. Flow
C. Mixing

- D. Diffusion
Correct answer: B
27. **Kinematic viscosity is the ratio of**
A. Viscosity to density
B. Density to viscosity
C. Stress to strain
D. Force to area
Correct answer: A
28. **Which system shows constant viscosity?**
A. Pseudoplastic
B. Dilatant
C. Plastic
D. Newtonian
Correct answer: D
29. **Thixotropy refers to**
A. Increase in viscosity with time
B. Decrease in viscosity with time
C. Constant viscosity
D. Sudden flow
Correct answer: B
30. **Dilatant systems show**
A. Decrease in viscosity on shear
B. Increase in viscosity on shear
C. No change in viscosity
D. Plastic flow
Correct answer: B
31. **Which viscometer is based on capillary flow?**
A. Brookfield
B. Ostwald
C. Cone and plate
D. Stormer
Correct answer: B
32. **Falling sphere viscometer works on**
A. Stoke's law
B. Newton's law
C. Hooke's law
D. Poiseuille's law
Correct answer: A
33. **Plastic flow exhibits**
A. Yield value
B. Linear flow
C. Turbulent flow
D. No resistance
Correct answer: A
34. **Which system is ideal for suspensions?**
A. Newtonian
B. Dilatant
C. Thixotropic
D. Elastic
Correct answer: C
35. **Stress is defined as force per unit**
A. Volume
B. Mass
C. Area
D. Length
Correct answer: C
36. **Strain is the ratio of**
A. Force/area
B. Change in length/original length
C. Volume/mass
D. Pressure/time
Correct answer: B
37. **Hooke's law applies to**
A. Plastic deformation
B. Elastic deformation
C. Viscous flow
D. Fracture
Correct answer: B
38. **Heckel equation relates to**
A. Dissolution
B. Compression
C. Mixing
D. Filtration
Correct answer: B
39. **Elastic modulus is the ratio of**
A. Stress to strain
B. Strain to stress
C. Force to area
D. Pressure to volume
Correct answer: A
40. **Rheology is the study of**
A. Heat transfer
B. Flow of matter
C. Surface tension

- D. Diffusion
Correct answer: B
41. **Which is a non-Newtonian system?**
A. Water
B. Glycerin
C. Blood
D. Alcohol
Correct answer: C
42. **Viscosity decreases with increase in temperature for**
A. Solids
B. Liquids
C. Gases
D. Plastics
Correct answer: B
43. **Brookfield viscometer is a**
A. Capillary viscometer
B. Rotational viscometer
C. Falling sphere viscometer
D. Efflux viscometer
Correct answer: B
44. **Yield value is characteristic of**
A. Newtonian fluids
B. Plastic systems
C. Dilatant systems
D. Elastic solids
Correct answer: B
45. **Pseudoplastic systems show**
A. Shear thickening
B. Shear thinning
C. Constant viscosity
D. Yield value
Correct answer: B
46. **Stress-strain curve is used to study**
A. Flow behavior
B. Elasticity
C. Dissolution
D. Diffusion
Correct answer: B
47. **Thixotropy is useful in pharmaceutical suspensions because it**
A. Prevents sedimentation
B. Improves flow on shaking
C. Increases viscosity permanently
D. Causes coagulation
Correct answer: B
48. **Which unit measures viscosity?**
A. Pascal
B. Poise
C. Newton
D. Joule
Correct answer: B
49. **Suspensions are heterogeneous systems consisting of**
A. Solid in gas
B. Liquid in liquid
C. Solid in liquid
D. Gas in liquid
Correct answer: C
50. **Flocculated suspensions show**
A. Hard cake
B. Slow sedimentation
C. Rapid sedimentation with loose cake
D. No sedimentation
Correct answer: C
51. **Deflocculated suspensions form**
A. Loose sediment
B. Hard cake
C. No sediment
D. Gel
Correct answer: B
52. **Stokes' law is used to calculate**
A. Viscosity
B. Settling velocity
C. Density
D. Surface tension
Correct answer: B
53. **Emulsions are systems of**
A. Solid in liquid
B. Liquid in liquid
C. Gas in liquid
D. Solid in gas
Correct answer: B

54. **The dispersed phase in O/W emulsion is**
A. Water
B. Oil
C. Gas
D. Solid
Correct answer: B
55. **HLB system is used for selecting**
A. Preservatives
B. Emulsifiers
C. Suspending agents
D. Buffers
Correct answer: B
56. **Microemulsions are**
A. Thermodynamically unstable
B. Thermodynamically stable
C. Coarse dispersions
D. Suspensions
Correct answer: B
57. **Multiple emulsions are also known as**
A. Simple emulsions
B. Double emulsions
C. Macroemulsions
D. Nanoemulsions
Correct answer: B
58. **Creaming is due to difference in**
A. Particle size
B. Density
C. Viscosity
D. Charge
Correct answer: B
59. **Emulsion stability is improved by**
A. Increasing particle size
B. Decreasing viscosity
C. Increasing viscosity
D. Removing emulsifier
Correct answer: C
60. **Preservation of emulsions is necessary to prevent**
A. Oxidation
B. Microbial growth
C. Sedimentation
D. Coalescence
Correct answer: B
61. **Rheology of emulsions mainly depends on**
A. Oil phase
B. Water phase
C. Dispersed phase concentration
D. Preservative
Correct answer: C
62. **Which theory explains emulsification by surface tension reduction?**
A. Oriented wedge theory
B. Surface tension theory
C. Plastic film theory
D. Adsorption theory
Correct answer: B
63. **Which emulsifier favors O/W emulsions?**
A. Low HLB
B. High HLB
C. Neutral HLB
D. Zero HLB
Correct answer: B
64. **Sedimentation volume is a measure of**
A. Stability
B. Density
C. Viscosity
D. pH
Correct answer: A
65. **Flocculating agents reduce**
A. Zeta potential
B. Particle size
C. Viscosity
D. Density
Correct answer: A
66. **Emulsion cracking is**
A. Reversible
B. Irreversible
C. Temporary
D. Partial
Correct answer: B

67. **Which is NOT an emulsion instability?**
A. Creaming
B. Cracking
C. Coalescence
D. Diffusion
Correct answer: D
68. **Multiple emulsions are useful for**
A. Taste masking
B. Sustained release
C. Both A and B
D. None
Correct answer: C
69. **Phase inversion occurs when**
A. Temperature changes
B. Phase volume ratio changes
C. Viscosity increases
D. Preservative added
Correct answer: B
70. **Interfacial tension exists between**
A. Solid and gas
B. Liquid and liquid
C. Solid and solid
D. Gas and gas
Correct answer: B
71. **Suspending agents increase**
A. Sedimentation rate
B. Viscosity
C. Particle size
D. Density
Correct answer: B
72. **Which is a commonly used emulsifier?**
A. Talc
B. Acacia
C. Lactose
D. Starch
Correct answer: B
73. **Micromeritics deals with**
A. Flow of liquids
B. Particle size and properties
C. Chemical kinetics
D. Heat transfer
Correct answer: B
74. **Mean particle size is useful in**
A. Dissolution
B. Stability
C. Bioavailability
D. All of the above
Correct answer: D
75. **Which method is based on light scattering?**
A. Sieving
B. Microscopy
C. Laser diffraction
D. Sedimentation
Correct answer: C
76. **Specific surface area increases when**
A. Particle size increases
B. Particle size decreases
C. Density increases
D. Porosity decreases
Correct answer: B
77. **Porosity is the ratio of**
A. Void volume to total volume
B. Solid volume to total volume
C. Mass to volume
D. Area to volume
Correct answer: A
78. **Bulk density is measured by**
A. True volume
B. Tapped volume
C. Bulk volume
D. Void volume
Correct answer: C
79. **Tapped density is higher than bulk density because of**
A. Particle deformation
B. Reduction in void space
C. Increase in mass
D. Moisture absorption
Correct answer: B
80. **Angle of repose indicates**
A. Density
B. Porosity

- C. Flow property
D. Surface area
Correct answer: C
81. **Free-flowing powders have angle of repose**
A. $>40^\circ$
B. $30-40^\circ$
C. $<30^\circ$
D. 60°
Correct answer: C
82. **Permeability relates to**
A. Flow of gas through powder bed
B. Particle shape
C. Surface charge
D. Density
Correct answer: A
83. **Which is a derived property of powders?**
A. Particle size
B. Shape
C. Porosity
D. Density
Correct answer: C
84. **Carr's index is a measure of**
A. Density
B. Flowability
C. Porosity
D. Surface area
Correct answer: B
85. **Hausner ratio is the ratio of**
A. Bulk to tapped density
B. Tapped to bulk density
C. True to bulk density
D. Void to solid volume
Correct answer: B
86. **Counting method for particle size determination uses**
A. Microscope
B. Laser
C. Sedimentation
D. Sieving
Correct answer: A
87. **Particle shape affects**
A. Flow
B. Packing
C. Dissolution
D. All of the above
Correct answer: D
88. **True density excludes**
A. Solid volume
B. Void space
C. Particle mass
D. Material density
Correct answer: B
89. **Specific surface area is expressed as**
A. m^2/kg
B. kg/m^2
C. m/kg
D. kg/m
Correct answer: A
90. **Which powder shows poor flow?**
A. Spherical
B. Smooth
C. Irregular
D. Coarse
Correct answer: C
91. **Adsorption is a**
A. Bulk phenomenon
B. Surface phenomenon
C. Chemical reaction
D. Physical mixing
Correct answer: B
92. **Gas adsorption is used to determine**
A. Density
B. Porosity
C. Surface area
D. Particle number
Correct answer: C
93. **Bulkiness is inverse of**
A. Density
B. Porosity
C. Surface area
D. Flow
Correct answer: A
94. **Packing arrangement affects**
A. Flow

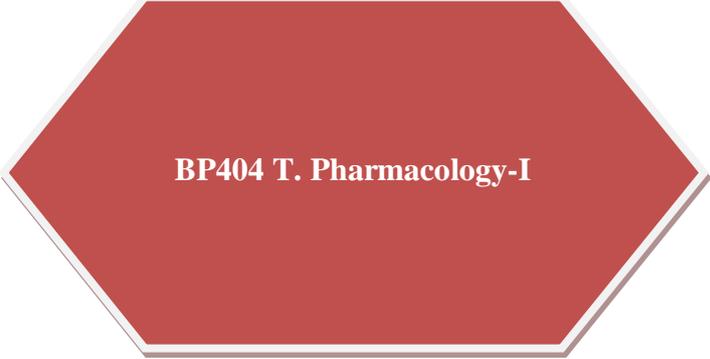
- B. Porosity
C. Density
D. All of the above
Correct answer: D
95. **Which factor does NOT affect flow property?**
A. Particle size
B. Shape
C. Color
D. Moisture
Correct answer: C
96. **Which is a method for particle size separation?**
A. Sieving
B. Adsorption
C. Compression
D. Diffusion
Correct answer: A
97. **Zero-order reactions have rate independent of**
A. Time
B. Concentration
C. Temperature
D. pH
Correct answer: B
98. **First-order reaction rate depends on**
A. Square of concentration
B. Concentration
C. Zero concentration
D. Pressure
Correct answer: B
99. **Units of first-order rate constant are**
A. Concentration/time
B. Time^{-1}
C. Concentration
D. Time
Correct answer: B
100. **Shelf life is defined as time for drug to degrade to**
A. 80%
B. 90%
C. 50%
D. 95%
Correct answer: B
101. **Temperature effect on degradation is explained by**
A. Stokes law
B. Arrhenius equation
C. Heckel equation
D. Noyes-Whitney equation
Correct answer: B
102. **Hydrolysis mainly affects drugs containing**
A. Alcohols
B. Esters and amides
C. Ketones
D. Hydrocarbons
Correct answer: B
103. **Oxidation is promoted by**
A. Light
B. Oxygen
C. Metal ions
D. All of the above
Correct answer: D
104. **Dielectric constant affects**
A. Hydrolysis rate
B. Oxidation rate
C. Both A and B
D. None
Correct answer: C
105. **Specific acid catalysis involves**
A. H^+ ions only
B. Buffer species
C. OH^- ions only
D. Solvent
Correct answer: A
106. **General acid catalysis involves**
A. H^+ only
B. Buffer components
C. Solvent only
D. Temperature
Correct answer: B

107. **Photolytic degradation occurs due to**
A. Heat
B. Light
C. Moisture
D. Oxygen
Correct answer: B
108. **Stabilization against oxidation is done using**
A. Antioxidants
B. Buffers
C. Surfactants
D. Sweeteners
Correct answer: A
109. **Accelerated stability testing uses**
A. Low temperature
B. Room temperature
C. Elevated temperature
D. Freezing
Correct answer: C
110. **pH affects drug stability mainly by**
A. Solubility
B. Hydrolysis rate
C. Color
D. Density
Correct answer: B
111. **Pseudo-first order reactions occur when**
A. Both reactants vary
B. One reactant is in excess
C. No reactant changes
D. Temperature is constant
Correct answer: B
112. **Expiration dating is based on**
A. Kinetics
B. Appearance
C. Taste
D. Density
Correct answer: A
113. **Oxidative degradation can be prevented by**
A. Chelating agents
B. Nitrogen flushing
C. Antioxidants
D. All of the above
Correct answer: D
114. **Ionic strength influences**
A. Reaction rate
B. Solubility
C. Stability
D. All of the above
Correct answer: D
115. **Photolytic degradation is prevented by**
A. Amber containers
B. Refrigeration
C. Drying
D. Dilution
Correct answer: A
116. **Half-life of first-order reaction is**
A. Concentration dependent
B. Concentration independent
C. Time dependent
D. Temperature independent
Correct answer: B
117. **Chemical degradation leads to loss of**
A. Color
B. Potency
C. Weight
D. Shape
Correct answer: B
118. **Arrhenius plot is between**
A. $\log k$ vs $1/T$
B. k vs T
C. $\log C$ vs t
D. C vs t
Correct answer: A
119. **Buffer catalysis occurs in**
A. Zero order reactions
B. First order reactions
C. Acid-base reactions
D. Oxidation
Correct answer: C

120. **Drug stability studies are essential for**

- A. Quality control
- B. Shelf life determination
- C. Safety
- D. All of the above

Correct answer: D



BP404 T. Pharmacology-I

1. **Pharmacology is the study of**
 - A. Drugs and poisons
 - B. Drugs and their actions on living systems
 - C. Preparation of drugs
 - D. Sources of drugs

Correct answer: B
2. **The term “drug” is best defined as a substance that**
 - A. Is toxic to cells
 - B. Modifies physiological functions
 - C. Has nutritional value
 - D. Causes addiction

Correct answer: B
3. **Which is NOT a natural source of drugs?**
 - A. Plants
 - B. Animals
 - C. Microorganisms
 - D. Synthetic chemicals

Correct answer: D
4. **Essential drugs concept mainly emphasizes**
 - A. Expensive medicines
 - B. Availability of life-saving drugs
 - C. Rational and cost-effective drug use
 - D. Herbal medicines

Correct answer: C
5. **Which route of administration gives fastest action?**
 - A. Oral
 - B. Subcutaneous
 - C. Intravenous
 - D. Intramuscular

Correct answer: C
6. **An agonist produces its effect by**
 - A. Blocking receptors
 - B. Activating receptors
 - C. Destroying receptors
 - D. Inhibiting enzymes

Correct answer: B
7. **A competitive antagonist**
 - A. Reduces maximum response
 - B. Cannot be reversed
 - C. Competes with agonist at same receptor
 - D. Binds irreversibly

Correct answer: C
8. **Non-competitive antagonists**
 - A. Shift dose response curve rightward
 - B. Decrease maximal efficacy
 - C. Increase potency
 - D. Compete with agonist

Correct answer: B
9. **Spare receptors are responsible for**
 - A. Drug tolerance
 - B. Increased potency
 - C. Reduced efficacy
 - D. Toxicity

Correct answer: B
10. **Tachyphylaxis refers to**
 - A. Delayed drug response
 - B. Rapid loss of response
 - C. Allergic reaction
 - D. Cumulative toxicity

Correct answer: B
11. **Drug dependence means**
 - A. Need for increasing dose
 - B. Psychological attachment
 - C. Withdrawal symptoms on stoppage
 - D. Drug allergy

Correct answer: C
12. **Addiction is characterized by**
 - A. Occasional use
 - B. Compulsive drug use
 - C. Therapeutic benefit
 - D. Short-term exposure

Correct answer: B
13. **Idiosyncrasy is**
 - A. Dose-related reaction
 - B. Genetically determined abnormal response

- C. Allergic reaction
D. Toxic effect
Correct answer: B
14. **Drug allergy is mediated by**
A. Enzymes
B. Immune system
C. Receptors
D. Metabolites
Correct answer: B
15. **Membrane transport involving no energy is**
A. Active transport
B. Facilitated diffusion
C. Pinocytosis
D. Endocytosis
Correct answer: B
16. **Drug absorption is best defined as**
A. Entry of drug into blood
B. Distribution in tissues
C. Drug metabolism
D. Drug elimination
Correct answer: A
17. **Highly protein-bound drugs have**
A. Rapid elimination
B. Low distribution
C. Longer duration of action
D. Poor bioavailability
Correct answer: C
18. **The primary organ of drug metabolism is**
A. Kidney
B. Lung
C. Liver
D. Intestine
Correct answer: C
19. **Enzyme induction results in**
A. Decreased drug metabolism
B. Increased drug action
C. Increased drug metabolism
D. Toxicity
Correct answer: C
20. **Enzyme inhibition leads to**
A. Reduced plasma drug level
B. Increased drug half-life
C. Reduced efficacy
D. Faster elimination
Correct answer: B
21. **First-order elimination kinetics means**
A. Constant amount eliminated
B. Constant fraction eliminated
C. No elimination
D. Saturated elimination
Correct answer: B
22. **Zero-order kinetics shows**
A. Concentration-dependent elimination
B. Constant rate of elimination
C. Rapid clearance
D. First-pass metabolism
Correct answer: B
23. **Bioavailability refers to**
A. Drug potency
B. Rate and extent of absorption
C. Drug distribution
D. Drug metabolism
Correct answer: B
24. **Excretion of drugs occurs mainly through**
A. Lungs
B. Skin
C. Kidney
D. Saliva
Correct answer: C
25. **Pharmacodynamics deals with**
A. What body does to drug
B. What drug does to body
C. Drug metabolism
D. Drug elimination
Correct answer: B
26. **Receptors are mainly**
A. Lipids
B. Carbohydrates
C. Proteins
D. Steroids
Correct answer: C

27. **Which receptor works through G-proteins?**
A. Ion channel receptor
B. Enzyme-linked receptor
C. GPCR
D. Nuclear receptor
Correct answer: C
28. **Ion channel receptors produce responses in**
A. Seconds to minutes
B. Minutes to hours
C. Hours
D. Days
Correct answer: A
29. **JAK-STAT receptors are involved in**
A. Steroid action
B. Cytokine signaling
C. Neurotransmission
D. Ion transport
Correct answer: B
30. **Dose-response curve helps to determine**
A. Bioavailability
B. Potency and efficacy
C. Distribution
D. Metabolism
Correct answer: B
31. **Therapeutic index is the ratio of**
A. ED_{50}/LD_{50}
B. LD_{50}/ED_{50}
C. TD_{50}/ED_{50}
D. ED_{50}/TD_{50}
Correct answer: B
32. **A drug with narrow therapeutic index is**
A. Safe
B. Highly toxic
C. Requires monitoring
D. Ineffective
Correct answer: C
33. **Additive drug effect means**
A. Effect greater than sum
B. Effect equal to sum
C. Effect less than sum
D. No effect
Correct answer: B
34. **Synergism occurs when**
A. Two drugs cancel effect
B. Combined effect exceeds sum
C. One drug blocks another
D. Drugs have no effect
Correct answer: B
35. **Antagonism means**
A. Increased drug action
B. Reduced drug action
C. Additive action
D. Synergistic action
Correct answer: B
36. **Adverse drug reactions are**
A. Always predictable
B. Dose dependent only
C. Unwanted effects at therapeutic dose
D. Beneficial effects
Correct answer: C
37. **Type-A ADRs are**
A. Allergic
B. Bizarre
C. Dose related
D. Idiosyncratic
Correct answer: C
38. **Type-B ADRs are**
A. Predictable
B. Dose related
C. Unpredictable
D. Mild
Correct answer: C
39. **Pharmacokinetic drug interaction affects**
A. Receptors
B. Absorption, metabolism or excretion
C. Signal transduction
D. Drug efficacy
Correct answer: B
40. **Pharmacodynamic interaction occurs at**

- A. Liver
B. Kidney
C. Receptor level
D. Gut
Correct answer: C
41. **Drug discovery phase includes**
A. Clinical trials
B. Animal testing
C. Lead compound identification
D. Pharmacovigilance
Correct answer: C
42. **Preclinical studies are performed on**
A. Humans
B. Animals
C. Volunteers
D. Patients
Correct answer: B
43. **Phase-I clinical trials assess**
A. Efficacy
B. Safety and dosage
C. Adverse reactions
D. Comparison with standard drug
Correct answer: B
44. **Phase-II trials evaluate**
A. Safety only
B. Efficacy and dose
C. Marketing
D. Post-marketing surveillance
Correct answer: B
45. **Phase-III trials involve**
A. Small volunteers
B. Large patient groups
C. Animals
D. Post-marketing
Correct answer: B
46. **Phase-IV studies are related to**
A. Drug discovery
B. Preclinical evaluation
C. Pharmacovigilance
D. Toxicology
Correct answer: C
47. **Pharmacovigilance deals with**
A. Drug synthesis
B. Drug safety monitoring
C. Drug absorption
D. Drug pricing
Correct answer: B
48. **Post-marketing surveillance identifies**
A. Rare adverse effects
B. Drug potency
C. Drug solubility
D. Drug stability
Correct answer: A
49. **ANS consists of**
A. Somatic system
B. Sympathetic and parasympathetic systems
C. Central nervous system
D. Peripheral nerves only
Correct answer: B
50. **Main neurotransmitter of parasympathetic system is**
A. Dopamine
B. Acetylcholine
C. Noradrenaline
D. Serotonin
Correct answer: B
51. **Sympathetic postganglionic neurotransmitter is**
A. Acetylcholine
B. Dopamine
C. Noradrenaline
D. GABA
Correct answer: C
52. **Co-transmission refers to release of**
A. One neurotransmitter
B. Two or more neurotransmitters
C. Hormones only
D. Enzymes
Correct answer: B
53. **Parasympathomimetics act by**
A. Blocking acetylcholine
B. Mimicking acetylcholine
C. Inhibiting noradrenaline

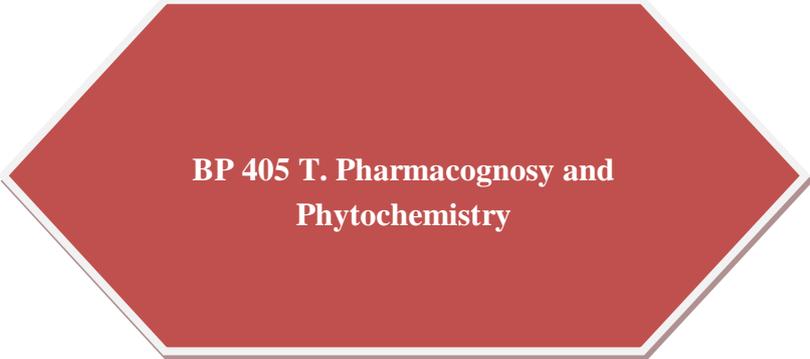
- D. Blocking receptors
Correct answer: B
54. **Parasympatholytics block**
A. Adrenergic receptors
B. Muscarinic receptors
C. Nicotinic receptors only
D. Dopamine receptors
Correct answer: B
55. **Sympathomimetics mimic effects of**
A. Acetylcholine
B. Histamine
C. Noradrenaline
D. GABA
Correct answer: C
56. **Sympatholytics reduce**
A. Parasympathetic activity
B. Sympathetic activity
C. CNS activity
D. Skeletal muscle tone
Correct answer: B
57. **Neuromuscular blockers act at**
A. CNS
B. Autonomic ganglia
C. Neuromuscular junction
D. Spinal cord
Correct answer: C
58. **Non-depolarizing muscle relaxants block**
A. Sodium channels
B. Acetylcholine receptors
C. Calcium channels
D. Potassium channels
Correct answer: B
59. **Local anesthetics act by blocking**
A. Calcium channels
B. Potassium channels
C. Sodium channels
D. Chloride channels
Correct answer: C
60. **Local anesthetics prevent**
A. Muscle contraction
B. Nerve impulse conduction
C. Blood flow
D. Neurotransmitter release
Correct answer: B
61. **Drug of choice for myasthenia gravis is**
A. Atropine
B. Neostigmine
C. Propranolol
D. Diazepam
Correct answer: B
62. **Myasthenia gravis is due to deficiency of**
A. Dopamine
B. Acetylcholine receptors
C. GABA
D. Serotonin
Correct answer: B
63. **Drugs used in glaucoma reduce**
A. Blood pressure
B. Intraocular pressure
C. Heart rate
D. CNS activity
Correct answer: B
64. **Pilocarpine is used in**
A. Asthma
B. Glaucoma
C. Hypertension
D. Epilepsy
Correct answer: B
65. **Atropine is a**
A. Parasympathomimetic
B. Parasympatholytic
C. Sympathomimetic
D. Sympatholytic
Correct answer: B
66. **Adrenergic receptors include**
A. M and N
B. Alpha and beta
C. GABA
D. Dopamine
Correct answer: B
67. **Beta-blockers are used in**
A. Hypertension
B. Asthma only
C. Parkinson's disease

- D. Epilepsy
Correct answer: A
68. **Ganglion blockers act on**
A. Muscarinic receptors
B. Nicotinic receptors
C. Beta receptors
D. Alpha receptors
Correct answer: B
69. **Skeletal muscle relaxants act on**
A. CNS only
B. Peripheral muscles
C. Heart
D. Smooth muscles
Correct answer: B
70. **Local anesthetics cause**
A. Loss of consciousness
B. Loss of sensation
C. Muscle paralysis
D. Sedation
Correct answer: B
71. **Lignocaine is commonly used as**
A. General anesthetic
B. Local anesthetic
C. Sedative
D. Antidepressant
Correct answer: B
72. **Parasympathetic stimulation causes**
A. Increased heart rate
B. Bronchodilation
C. Miosis
D. Glycogenolysis
Correct answer: C
73. **Main inhibitory neurotransmitter in CNS is**
A. Dopamine
B. Glutamate
C. GABA
D. Serotonin
Correct answer: C
74. **Main excitatory neurotransmitter is**
A. GABA
B. Glutamate
C. Glycine
D. Dopamine
Correct answer: B
75. **General anesthetics produce**
A. Analgesia only
B. Loss of consciousness
C. Muscle paralysis only
D. Amnesia only
Correct answer: B
76. **Sedatives reduce**
A. Pain
B. Anxiety
C. Fever
D. Inflammation
Correct answer: B
77. **Hypnotics induce**
A. Sleep
B. Analgesia
C. Muscle relaxation
D. Anesthesia
Correct answer: A
78. **Benzodiazepines enhance action of**
A. Dopamine
B. GABA
C. Glutamate
D. Serotonin
Correct answer: B
79. **Antiepileptic drugs reduce**
A. Seizure activity
B. Anxiety
C. Depression
D. Pain
Correct answer: A
80. **Alcohol is a**
A. CNS stimulant
B. CNS depressant
C. Hallucinogen
D. Antipsychotic
Correct answer: B
81. **Disulfiram is used in**
A. Depression
B. Alcohol dependence

- C. Epilepsy
D. Anxiety
Correct answer: B
82. **Antipsychotics are mainly used to treat**
A. Anxiety
B. Depression
C. Schizophrenia
D. Insomnia
Correct answer: C
83. **Antidepressants increase levels of**
A. GABA
B. Serotonin and noradrenaline
C. Acetylcholine
D. Dopamine only
Correct answer: B
84. **Anxiolytics reduce**
A. Seizures
B. Anxiety
C. Depression
D. Psychosis
Correct answer: B
85. **Mood stabilizers are used in**
A. Depression
B. Bipolar disorder
C. Anxiety
D. Parkinson's disease
Correct answer: B
86. **Hallucinogens cause**
A. Sedation
B. Analgesia
C. Altered perception
D. Sleep
Correct answer: C
87. **Parkinson's disease is due to deficiency of**
A. Serotonin
B. Dopamine
C. GABA
D. Acetylcholine
Correct answer: B
88. **Levodopa is used in**
A. Alzheimer's disease
B. Parkinson's disease
C. Depression
D. Epilepsy
Correct answer: B
89. **Alzheimer's disease involves loss of**
A. Dopaminergic neurons
B. Cholinergic neurons
C. GABA neurons
D. Serotonergic neurons
Correct answer: B
90. **Nootropics improve**
A. Sleep
B. Memory and cognition
C. Muscle tone
D. Mood
Correct answer: B
91. **CNS stimulants increase**
A. Alertness
B. Sleep
C. Sedation
D. Depression
Correct answer: A
92. **Opioid analgesics act mainly on**
A. NMDA receptors
B. Opioid receptors
C. GABA receptors
D. Dopamine receptors
Correct answer: B
93. **Morphine produces**
A. Analgesia
B. Sedation
C. Respiratory depression
D. All of the above
Correct answer: D
94. **Naloxone is a**
A. Opioid agonist
B. Partial agonist
C. Opioid antagonist
D. Sedative
Correct answer: C
95. **Drug tolerance means**
A. Decreased response to same dose
B. Increased sensitivity

- C. Allergy
D. Toxicity
Correct answer: A
96. **Drug abuse refers to**
A. Therapeutic use
B. Socially unacceptable use
C. Rational drug use
D. Prescribed use
Correct answer: B
97. **Withdrawal symptoms occur due to**
A. Drug overdose
B. Drug dependence
C. Drug allergy
D. Drug toxicity
Correct answer: B
98. **Physical dependence involves**
A. Psychological craving
B. Withdrawal symptoms
C. Euphoria
D. Sedation
Correct answer: B
99. **Psychological dependence involves**
A. Physical symptoms
B. Emotional craving
C. Tolerance only
D. Toxicity
Correct answer: B
100. **Tolerance develops due to**
A. Enzyme induction
B. Receptor down-regulation
C. Both A and B
D. Allergy
Correct answer: C
101. **Centrally acting muscle relaxants act on**
A. Neuromuscular junction
B. CNS
C. Peripheral nerves
D. Smooth muscle
Correct answer: B
102. **Pre-anesthetic drugs are used to**
A. Induce anesthesia
B. Reduce anxiety and secretions
C. Produce analgesia only
D. Cause paralysis
Correct answer: B
103. **General anesthetics cause**
A. Consciousness without pain
B. Reversible loss of consciousness
C. Permanent unconsciousness
D. Local anesthesia
Correct answer: B
104. **Glycine acts mainly as**
A. Excitatory neurotransmitter
B. Inhibitory neurotransmitter
C. Hormone
D. Enzyme
Correct answer: B
105. **Serotonin is involved in**
A. Mood regulation
B. Sleep
C. Appetite
D. All of the above
Correct answer: D
106. **Dopamine deficiency causes**
A. Depression
B. Parkinsonism
C. Epilepsy
D. Anxiety
Correct answer: B
107. **Tricyclic antidepressants act by inhibiting**
A. Dopamine synthesis
B. Reuptake of serotonin and noradrenaline
C. GABA release
D. Acetylcholine action
Correct answer: B
108. **MAO inhibitors inhibit metabolism of**
A. Acetylcholine
B. Monoamines
C. GABA

- D. Glutamate
Correct answer: B
109. **Lithium is used in**
A. Depression
B. Bipolar disorder
C. Schizophrenia
D. Anxiety
Correct answer: B
110. **CNS stimulants are contraindicated in**
A. Depression
B. ADHD
C. Anxiety disorders
D. Narcolepsy
Correct answer: C
111. **Opioid dependence is associated with**
A. Tolerance
B. Withdrawal
C. Addiction
D. All of the above
Correct answer: D
112. **Hallucinogens mainly affect**
A. Consciousness
B. Sensory perception
C. Motor function
D. Autonomic system
Correct answer: B
113. **Sedative-hypnotics primarily depress**
A. CNS
B. PNS
C. CVS
D. GIT
Correct answer: A
114. **Anxiolytics commonly belong to**
A. Opioids
B. Benzodiazepines
C. Antipsychotics
D. Antidepressants
Correct answer: B
115. **Opioid antagonists reverse**
A. Analgesia
B. Respiratory depression
C. Sedation
D. All of the above
Correct answer: D
116. **Alzheimer's drugs improve**
A. Dopamine levels
B. Acetylcholine transmission
C. GABA action
D. Serotonin levels
Correct answer: B
117. **Drug addiction primarily involves**
A. Liver
B. Kidney
C. Brain reward system
D. Heart
Correct answer: C
118. **Tolerance to opioids develops due to**
A. Enzyme inhibition
B. Receptor desensitization
C. Allergy
D. Idiosyncrasy
Correct answer: B
119. **Physical dependence is common with**
A. Antidepressants
B. Opioids
C. Antipsychotics
D. Antihistamines
Correct answer: B
120. **Drug abuse prevention requires**
A. Education
B. Regulation
C. Rehabilitation
D. All of the above
Correct answer: D



**BP 405 T. Pharmacognosy and
Phytochemistry**

1. Pharmacognosy is the study of:

- A. Synthetic drugs
- B. Crude drugs from natural sources
- C. Drug synthesis
- D. Clinical pharmacy

Correct answer: B

2. The term Pharmacognosy was first used by:

- A. Galen
- B. Pedanius Dioscorides
- C. Seydler
- D. Hippocrates

Correct answer: C

3. The word Pharmacognosy is derived from Greek words meaning:

- A. Drug and science
- B. Drug and knowledge
- C. Nature and medicine
- D. Plant and drug

Correct answer: B

4. Which is NOT a source of crude drugs?

- A. Plants
- B. Animals
- C. Minerals
- D. Synthetic chemicals

Correct answer: D

5. Digitalis leaf is an example of:

- A. Animal drug
- B. Mineral drug
- C. Plant drug
- D. Marine drug

Correct answer: C

6. Organized drugs include:

- A. Gums
- B. Latex
- C. Leaves
- D. Resins

Correct answer: C

7. Unorganized drugs lack:

- A. Chemical constituents
- B. Cellular structure
- C. Medicinal value
- D. Moisture

Correct answer: B

8. Which is an unorganized drug?

- A. Senna leaf
- B. Ginger rhizome
- C. Acacia gum
- D. Clove bud

Correct answer: C

9. Dried latex is an example of:

- A. Organized drug
- B. Unorganized drug
- C. Marine drug
- D. Synthetic drug

Correct answer: B

10. Aloe is obtained from:

- A. Dried juice
- B. Gum
- C. Resin
- D. Oil

Correct answer: A

11. Alphabetical classification is based on:

- A. Chemical constituents
- B. Morphology
- C. Pharmacological action
- D. Alphabetical order of drugs

Correct answer: D

12. Morphological classification is based on:

- A. Chemical nature
- B. Plant part used
- C. Therapeutic action
- D. Taxonomy

Correct answer: B

13. Taxonomical classification follows:

- A. Linnaean system
- B. Pharmacopoeia
- C. Chemical structure
- D. Therapeutic use

Correct answer: A

14. Chemical classification is useful for:

- A. Identification of plant source
- B. Studying biosynthesis
- C. Therapeutic grouping
- D. Market arrangement

Correct answer: B

15. Pharmacological classification groups drugs based on:

- A. Source
- B. Morphology
- C. Therapeutic action
- D. Chemistry

Correct answer: C

16. Chemotaxonomy relates:

- A. Morphology and action
- B. Chemistry and taxonomy
- C. Action and source
- D. Structure and synthesis

Correct answer: B

17. Serotaxonomy uses:

- A. Enzymes
- B. DNA markers
- C. Serological reactions
- D. Alkaloids

Correct answer: C

18. Evaluation by sense organs is called:

- A. Microscopic evaluation
- B. Physical evaluation
- C. Organoleptic evaluation
- D. Chemical evaluation

Correct answer: C

19. Colour, odour and taste are evaluated by:

- A. Chemical methods
- B. Biological methods
- C. Organoleptic methods
- D. Physical methods

Correct answer: C

20. Microscopic evaluation helps in:

- A. Determining ash value
- B. Detecting adulteration
- C. Chemical testing
- D. Pharmacological testing

Correct answer: B

21. Quantitative microscopy includes:

- A. Ash value
- B. Extractive value
- C. Lycopodium spore method
- D. Melting point

Correct answer: C

22. Lycopodium spore method is used for:

- A. Chemical estimation
- B. Powder analysis
- C. Determination of stomatal number
- D. Counting spores

Correct answer: B

23. Leaf constants include all EXCEPT:

- A. Stomatal number
- B. Vein islet number
- C. Palisade ratio
- D. Moisture content

Correct answer: D

24. Camera lucida is used for:

- A. Chemical analysis
- B. Drawing microscopic structures
- C. Measuring ash
- D. Drying samples

Correct answer: B

25. Ash value indicates:

- A. Moisture content
- B. Organic matter
- C. Inorganic impurities
- D. Volatile matter

Correct answer: C

26. Acid-insoluble ash indicates presence of:

- A. Carbonates
- B. Silica
- C. Sulphates
- D. Chlorides

Correct answer: B

27. Extractive value indicates:

- A. Purity
- B. Adulteration only
- C. Solubility of constituents
- D. Toxicity

Correct answer: C

28. Adulteration means:

- A. Substitution with genuine drug
- B. Addition of inferior material
- C. Purification
- D. Standardization

Correct answer: B

29. Deliberate adulteration is:

- A. Intentional
- B. Accidental
- C. Natural
- D. Legal

Correct answer: A

30. Exhausted drug is an example of:

- A. Accidental adulteration
- B. Intentional adulteration
- C. Natural adulteration
- D. Substitution

Correct answer: B

31. Cultivation improves:

- A. Adulteration
- B. Yield and quality
- C. Toxicity
- D. Moisture content

Correct answer: B

32. Climate affecting medicinal plants includes:

- A. Rainfall
- B. Temperature
- C. Light
- D. All of the above

Correct answer: D

33. Soil pH influences:

- A. Plant growth
- B. Drug constituents
- C. Yield
- D. All of the above

Correct answer: D

34. Plant hormones promote:

- A. Disease
- B. Growth regulation
- C. Adulteration
- D. Storage loss

Correct answer: B

35. Auxins mainly promote:

- A. Flowering
- B. Root formation
- C. Senescence
- D. Dormancy

Correct answer: B

36. Gibberellins promote:

- A. Dwarfism
- B. Seed dormancy
- C. Stem elongation
- D. Leaf fall

Correct answer: C

37. Cytokinins delay:

- A. Germination
- B. Senescence
- C. Root growth
- D. Flowering

Correct answer: B

38. Polyploidy results in:

- A. Reduced yield
- B. Increased alkaloid content
- C. Sterility only
- D. No effect

Correct answer: B

39. Mutation is:

- A. Planned breeding
- B. Sudden genetic change
- C. Polyploidy
- D. Hybridization

Correct answer: B

40. Hybridization involves:

- A. One species
- B. Two genetically different plants
- C. Mutation
- D. Tissue culture

Correct answer: B

41. Conservation of medicinal plants includes:

- A. In-situ conservation
- B. Ex-situ conservation
- C. Both A and B
- D. None

Correct answer: C

42. Botanical gardens are example of:

- A. In-situ conservation
- B. Ex-situ conservation
- C. Natural conservation
- D. Genetic erosion

Correct answer: B

43. National parks are example of:

- A. Ex-situ conservation
- B. In-situ conservation
- C. Artificial conservation
- D. Seed banks

Correct answer: B

44. Proper collection time ensures:

- A. Maximum yield
- B. Maximum active constituents
- C. Easy drying
- D. Minimum cost

Correct answer: B

45. Drying prevents:

- A. Growth
- B. Enzyme activity
- C. Microbial growth
- D. Both B and C

Correct answer: D

46. Sun drying is suitable for:

- A. Digitalis
- B. Cinnamon
- C. Ginger
- D. Volatile oil drugs

Correct answer: C

47. Shade drying preserves:

- A. Colour
- B. Volatile oils
- C. Glycosides
- D. All of the above

Correct answer: D

48. Storage should protect drugs from:

- A. Moisture
- B. Light
- C. Insects
- D. All of the above

Correct answer: D

49. Controlled atmosphere storage reduces:

- A. Yield
- B. Deterioration
- C. Quality
- D. Active principles

Correct answer: B

50. Pesticides are used to control:

- A. Adulteration
- B. Insects
- C. Enzymes
- D. Alkaloids

Correct answer: B

51. Collection at wrong time leads to:

- A. Higher potency
- B. Lower active constituents
- C. Better storage
- D. Better quality

Correct answer: B

52. Harvesting leaves is best done during:

- A. Flowering stage
- B. Senescence
- C. Full maturity
- D. Dormancy

Correct answer: A

53. Underground parts are collected:

- A. Before flowering
- B. During flowering
- C. After flowering
- D. Anytime

Correct answer: C

54. Bark collection should avoid:

- A. Ringing
- B. Peeling
- C. Scraping
- D. Drying

Correct answer: A

55. Controlled drying prevents:

- A. Loss of oils

- B. Enzyme degradation
- C. Microbial growth
- D. All of the above

Correct answer: D

56. Ideal storage temperature is:

- A. High
- B. Low and constant
- C. Variable
- D. Freezing

Correct answer: B

57. Polyploidy is induced using:

- A. Colchicine
- B. Auxin
- C. Gibberellin
- D. Cytokinin

Correct answer: A

58. Mutation breeding increases:

- A. Uniformity
- B. Variability
- C. Stability
- D. Dormancy

Correct answer: B

59. Hybrid vigor is also called:

- A. Mutation
- B. Polyploidy
- C. Heterosis
- D. Senescence

Correct answer: C

60. Conservation ensures:

- A. Extinction
- B. Sustainable use
- C. Overexploitation
- D. Loss of biodiversity

Correct answer: B

61. Plant tissue culture is based on the principle of:

- A. Mutation
- B. Hybridization

C. Totipotency

D. Polyploidy

Correct answer: C

62. Totipotency means:

A. Ability to photosynthesize

B. Ability to regenerate whole plant

C. Ability to flower

D. Ability to resist disease

Correct answer: B

63. Father of plant tissue culture is:

A. Haberlandt

B. Mendel

C. Linnaeus

D. Darwin

Correct answer: A

64. Explant refers to:

A. Culture medium

B. Plant hormone

C. Plant tissue used for culture

D. Nutrient solution

Correct answer: C

65. Callus is:

A. Organized tissue

B. Differentiated tissue

C. Undifferentiated mass of cells

D. Root tissue

Correct answer: C

66. Medium commonly used in tissue culture is:

A. KNOP medium

B. MS medium

C. Agar medium

D. Water medium

Correct answer: B

67. Agar is used in culture media as:

A. Nutrient

B. Hormone

C. Gelling agent

D. Preservative

Correct answer: C

68. Sterilization of media is done by:

A. Filtration

B. Autoclaving

C. Dry heat

D. Radiation

Correct answer: B

69. Growth regulators used in tissue culture include:

A. Auxins and cytokinins

B. Alkaloids

C. Glycosides

D. Tannins

Correct answer: A

70. Higher auxin concentration promotes:

A. Shoot formation

B. Root formation

C. Flowering

D. Senescence

Correct answer: B

71. Higher cytokinin concentration promotes:

A. Root formation

B. Callus only

C. Shoot formation

D. Seed germination

Correct answer: C

72. Micropropagation is used for:

A. Mutation

B. Rapid multiplication

C. Drug extraction

D. Drying

Correct answer: B

73. Somaclonal variation arises due to:

A. Field cultivation

B. Tissue culture

- C. Hybridization
 - D. Polyploidy
- Correct answer: B*

74. Tissue culture helps in producing:

- A. Disease-free plants
 - B. Inferior plants
 - C. Adulterants
 - D. Synthetic drugs
- Correct answer: A*

75. Edible vaccines are produced using:

- A. Animals
 - B. Microbes
 - C. Transgenic plants
 - D. Minerals
- Correct answer: C*

76. Example of edible vaccine plant is:

- A. Cotton
 - B. Tobacco
 - C. Banana
 - D. Jute
- Correct answer: C*

77. Advantage of edible vaccines is:

- A. Expensive
 - B. Needle-free delivery
 - C. Toxicity
 - D. Instability
- Correct answer: B*

78. Secondary metabolite production is enhanced by:

- A. Field cultivation
 - B. Tissue culture
 - C. Drying
 - D. Storage
- Correct answer: B*

79. Suspension culture consists of:

- A. Solid medium
- B. Liquid medium
- C. Semi-solid medium

- D. Dry medium
- Correct answer: B*

80. Hairy root culture is induced by:

- A. Virus
 - B. Fungus
 - C. Agrobacterium rhizogenes
 - D. Bacteria coli
- Correct answer: C*

81. Ayurveda originated in:

- A. China
 - B. India
 - C. Greece
 - D. Egypt
- Correct answer: B*

82. Siddha system is mainly practiced in:

- A. North India
 - B. Kerala
 - C. Tamil Nadu
 - D. Gujarat
- Correct answer: C*

83. Unani system originated from:

- A. India
 - B. China
 - C. Greece
 - D. Arabia
- Correct answer: C*

84. Homeopathy was founded by:

- A. Hahnemann
 - B. Galen
 - C. Charaka
 - D. Susruta
- Correct answer: A*

85. Chinese system of medicine uses:

- A. Acupuncture
- B. Surgery
- C. Chemotherapy

D. Radiotherapy

Correct answer: A

86. Secondary metabolites are:

- A. Essential for growth
- B. Waste products
- C. Metabolites with therapeutic value
- D. Nutrients

Correct answer: C

87. Alkaloids are:

- A. Acidic compounds
- B. Nitrogen-containing compounds
- C. Sugar derivatives
- D. Lipids

Correct answer: B

88. Alkaloids give positive test with:

- A. Molisch test
- B. Dragendorff's reagent
- C. Ninhydrin test
- D. Foam test

Correct answer: B

89. Glycosides consist of:

- A. Sugar only
- B. Aglycone only
- C. Sugar and aglycone
- D. Protein

Correct answer: C

90. Cardiac glycosides act on:

- A. CNS
- B. Liver
- C. Heart
- D. Kidney

Correct answer: C

91. Flavonoids are mainly:

- A. Alkaloids
- B. Polyphenolic compounds
- C. Lipids
- D. Proteins

Correct answer: B

92. Tannins show:

- A. Sweet taste
- B. Astringent taste
- C. Bitter taste
- D. Salty taste

Correct answer: B

93. Volatile oils are also called:

- A. Fixed oils
- B. Essential oils
- C. Mineral oils
- D. Resin oils

Correct answer: B

94. Volatile oils evaporate at:

- A. High temperature
- B. Room temperature
- C. Low temperature
- D. Freezing point

Correct answer: B

95. Resins are:

- A. Water soluble
- B. Alcohol soluble
- C. Proteinaceous
- D. Carbohydrates

Correct answer: B

96. Chemical tests are used to identify:

- A. Morphology
- B. Constituents
- C. Source
- D. Storage condition

Correct answer: B

97. Secondary metabolites mainly function in plants as:

- A. Growth promoters
- B. Defense agents
- C. Nutrients
- D. Hormones

Correct answer: B

98. Saponins produce:

- A. Precipitate
- B. Foam
- C. Colour
- D. Gas

Correct answer: B

99. Terpenoids are derived from:

- A. Amino acids
- B. Isoprene units
- C. Sugars
- D. Proteins

Correct answer: B

100. Phenolic compounds include:

- A. Alkaloids
- B. Glycosides
- C. Tannins
- D. Steroids

Correct answer: C

101. Cotton is obtained from:

- A. Stem
- B. Root
- C. Seed hair
- D. Leaf

Correct answer: C

102. Jute fiber is obtained from:

- A. Root
- B. Leaf
- C. Stem bark
- D. Seed

Correct answer: C

103. Hemp fiber source is:

- A. Cannabis sativa
- B. Papaver somniferum
- C. Linum usitatissimum
- D. Gossypium species

Correct answer: A

104. Hallucinogenic drug example is:

- A. Opium

- B. Cannabis
- C. Senna
- D. Ginger

Correct answer: B

105. Teratogens cause:

- A. Cancer
- B. Birth defects
- C. Addiction
- D. Allergy

Correct answer: B

106. Natural allergens cause:

- A. Infection
- B. Hypersensitivity
- C. Mutation
- D. Cancer

Correct answer: B

107. Acacia is a:

- A. Resin
- B. Gum
- C. Volatile oil
- D. Alkaloid

Correct answer: B

108. Agar is obtained from:

- A. Higher plants
- B. Animals
- C. Algae
- D. Fungi

Correct answer: C

109. Tragacanth is a:

- A. Starch
- B. Protein
- C. Gum
- D. Oil

Correct answer: C

110. Honey is produced by:

- A. Ants
- B. Bees
- C. Wasps

D. Butterflies

Correct answer: B

111. Gelatin is obtained from:

- A. Plants
- B. Bones and skin
- C. Algae
- D. Bacteria

Correct answer: B

112. Papain is obtained from:

- A. Pineapple
- B. Papaya
- C. Fig
- D. Banana

Correct answer: B

113. Bromelain is obtained from:

- A. Papaya
- B. Pineapple
- C. Banana
- D. Mango

Correct answer: B

114. Serratiopeptidase is obtained from:

- A. Plants
- B. Animals
- C. Bacteria
- D. Fungi

Correct answer: C

115. Castor oil is a:

- A. Volatile oil
- B. Fixed oil
- C. Resin
- D. Wax

Correct answer: B

116. Chaulmoogra oil is used in:

- A. Tuberculosis
- B. Leprosy
- C. Malaria
- D. Diabetes

Correct answer: B

117. Wool fat is also called:

- A. Bees wax
- B. Lanolin
- C. Paraffin
- D. Spermaceti

Correct answer: B

118. Bees wax is secreted by:

- A. Worker bees
- B. Queen bee
- C. Drone bee
- D. Larvae

Correct answer: A

119. Marine drugs are obtained from:

- A. Forest plants
- B. Animals only
- C. Sea organisms
- D. Minerals

Correct answer: C

120. Marine organisms are important source of:

- A. Antibiotics and anticancer agents
- B. Vitamins only
- C. Carbohydrates only
- D. Proteins only

Correct answer: A

About Authors



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