SEAL

GMGZ-2024

Do not open the Seal of the Question Booklet until you are asked to

Question Booklet Code: **A**

Question Booklet Series No: **100177**

Time Allowed: **120 Minutes** Total Questions: **150** Maximum Marks: **150**

There shall be negative marking **@0.25 mark** per question for wrong/multiple answers
Before answering any question, check the booklet that it contains **16 pages** and no page is missing, mutilated or repeated. In case of defect, get it replaced immediately.

INSTRUCTIONS FOR CANDIDATES

1. Fill in the OMR answer sheet, mentioning your Roll No. and other data as required in the place(s) indicated therein. Darken the appropriate circles in blue or black ball point pen only. Do not write any name / surname or put any symbol, sign, slogan, prayer or any mark of identification in the OMR answer sheet. Do not tamper with the bar-code or any other portion of the OMR answer sheet. Any such act is liable to render the answer sheet unfit for evaluation.
2. Correcting fluid, eraser, blade, books, textual material, script notes / loose paper, calculat document, slide rules, log tables / electronic watches, smart watch, cell phone, pager, oth electrical/ electronic devices etc, are not allowed inside the examination hall. In case the candidate found to be in possession of any of the above, he / she shall be expelled from the examinati without any enquiry as to whether the same was / were used by the candidate or not.
3. A machine will read the coded information furnished by you in the OMR Answer Sheet. If the information so furnished by you is incomplete or different from what you have given in the application form, you shall be awarded Zero mark.
4. Answer must be given by completely darkening one of the four circles / ovals representing the most appropriate answer given on the Answer Sheet corresponding to the relevant question. For answers not shown by properly darkening in black / blue ball point pen, no marks shall be awarded.
5. No Rough work should be done on the OMR Answer Sheet. Space for rough work has been provided in the Question Booklet itself.
6. After the examination is over, candidates must ensure to fold the OMR Answer Sheet at the perforation and separate the Original Copy and Candidate's Copy of the Two-Part OMR Answer Sheet in the presence of the Invigilator and handover the Original Copy to the Invigilator. The Candidate's Copy of the OMR Answer sheet may be taken by the candidate. Failure to hand over the original copy of the OMR Answer Sheet to the Invigilator before leaving the examination hall / room shall make the candidate liable for penal action.
7. Candidates may take with them the respective question-booklet after the examination is over.
8. Failure to comply with or violation of any of the above instructions shall be considered as adopting unfair means and action as deemed proper shall be taken.
9. Each question has four options. The candidate should select best option among the four.

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PEDAGOGY & EVALUATION

1. The study of variation in psychological characteristics of individuals is known as study of:
   a) Learning and teaching
   b) Behavioural disorders
   c) Social discrimination
   d) Individual differences

2. The knowledge of individual differences among students can help a teacher in:
   a) Maintaining proper class discipline
   b) Studying necessary literature
   c) Devising suitable teaching strategies
   d) Effective classroom management

3. Rogers defined the process of learning as change from:
   a) Ignorance to knowledge
   b) Real life to Ideal life
   c) Concrete to abstract understanding
   d) Known to unknown concepts

4. As a result of feedback based on formative assessment, learners modify their existing knowledge. In this case, it is:
   a) Assessment of learning
   b) Assessment with learning
   c) Assessment for learning
   d) Assessment as learning

5. The degree to which a learner is prepared to receive formal instruction is technically known as:
   a) Learning ability
   b) Learning readiness
   c) Learning capacity
   d) Learning eagerness

6. The characteristic of a test-item by virtue of which it can separate good learners from poor ones is technically termed as:
   a) Difficulty value of the item
   b) Discriminating power of the item
   c) Validity of the item
   d) Reliability of the item

7. Which of the following is least important for a teacher while providing for individual differences in the classroom?
   a) Diverse backgrounds of learners
   b) Heights and weights of learners
   c) Learning styles of learners
   d) Level of motivation of learners

8. Which of the following educational theorists gave the sociocultural theory of cognitive development (social constructivism)?
   a) Jean Piaget
   b) J S Bruner
   c) Lev Vygotsky
   d) John Dewey

9. The most useful teaching-learning material (TLM) to be used by a teacher is the one which:
   a) Attracts attention of learners towards teacher
   b) Is attractive and beautiful to look at
   c) Involves several sense organs in learning
   d) Helps maintain better classroom discipline

10. The main purpose of assessment in constructivist learning approach is to:
    a) Develop habit of reading and writing
    b) Know how children learn & what they learn
    c) Ensure classroom discipline
    d) Encourage learners to respect teacher's views

11. The major element of humanistic theory of learning given by Carl Rogers is the concept of:
a) Immense capacity of man
b) Fully functioning individual
c) Trial and error in learning
d) Importance of perception

12. Which of the following terms is most closely associated with the constructivist pedagogy of learning?
a) Description
b) Explanation
c) Experimentation
d) Indoctrination

13. In formative assessment system, feedback provided by the teacher to learners acts as:
a) Punishment
b) Reinforcement
c) Reward
d) Prompt

14. The first step in the process of test construction is:
a) Identification of content-domain
b) Development of test blueprint
c) Formulation of objectives of testing
d) Collection or construction of test items

15. Which of the following types of test-items are most appropriate for assessing higher order thinking abilities?
a) True-False type
b) Matching type
c) Essay type
d) Short-answer type

16. Which of the following is an example of formative assessment?
a) Probing questions in the classroom
b) Examination after the end of the course
c) Final submission of project report
d) Examination for promotion to the next grade

17. Which of the following is audio-visual aid for use by teachers?
a) Model
b) Television
c) Tape recorder
d) Projector

18. Which of the following teaching methods ensures active participation of learners?
a) Lecture method
b) Self-study method
c) Discussion method
d) Online presentation

19. The basic purpose of diagnostic assessment is to:
a) Know the learner's ability to learn
b) Understand learner's strengths and weaknesses
c) Decide the strategies of teaching
d) Motivate learners for active learning

20. Which of the following strategies should be preferred by a teacher for ensuring effective learning about birds and their life?
a) Displaying models of birds
b) Displaying sketches of birds
c) Organising a trip to zoo
d) Using pictures of birds

CHEMISTRY

21. For H-like atoms, the ground state energy is proportional to [where, μ is the reduced mass and Z is the nuclear charge]:
a) μ/Z^2
b) Z^2/μ
c) $1/\mu Z^2$
d) μZ^2

22. The decreasing order of the first ionisation energy of the following elements is:
a) Xe>Be>As>Al
b) Xe>As>Al>Be
c) Xe>As>Be>Al
d) Xe>Be>Al>As

23. The correct valence shell electronic configuration of the element with atomic number 22 is:

a) $[Ar]3d^2 4s^2$
b) $[Ar]4s^2 3d^2$
c) $[Ar]3d^4$
d) $[Ar]4s^2 4p^2$

24. With increase in pressure, the temperature range, over which the liquid state is stable:
a) Decreases
b) Increases
c) Remains constant
d) Decreases till the critical pressure and then increases

25. The V-shape of SO_2 is due to the presence of:
a) two σ and one π bonds
b) two σ and two π bonds
c) two σ and one lone pair of electrons
d) two σ and two π bonds and one lone pair of electrons

26. The number of P=O bonds present in the tetra basic acid $H_4P_2O_7$ is:
a) 3
b) 2
c) 1
d) None of these

27. At room temperature, HCl is a gas while HF is a liquid because:
a) of the strong bond between H and F in HF
b) HF is less acidic as compared to HCl
c) of strong intermolecular H-bonding in HF
d) HCl is less acidic as compared to HF

28. The metal that is extracted by the reduction method is:
a) Al
b) Hg
c) Au
d) Mg

29. Number of moles of ions produced by complete dissociation of one mole of Mohr's salt in water is:
a) 3
b) 4
c) 5
d) 6

30. The average speed of H_2, N_2 and O_2 gas molecules is in the order of:
a) $H_2 > N_2 > O_2$
b) $O_2 > N_2 > H_2$
c) $H_2 > O_2 > N_2$
d) $N_2 > O_2 > H_2$

31. On hydrolysis, Aluminium carbide produces:
a) CH_4
b) C_2H_6
c) C_2H_4
d) C_2H_2

32. The relationship between the equilibrium constant K_1 for the reaction

$$CO(g) + \frac{1}{2}O_2(g) \rightleftharpoons CO_2(g)$$

and the equilibrium constant K_2 for the reaction

$$2CO(g) + O_2(g) \rightleftharpoons 2CO_2(g)$$

is :
a) $2K_1 = K_2$
b) $K_1 = K_2^2$
c) $K_1 = K_2$
d) $K^2_1 = K_2$

33. For the distribution of molecular velocities of gases, identify the correct order from the following (where V_{mp}, V_{av}, V_{rms} are the most probable velocity, average velocity and root mean square velocity respectively).
a) $V_{rms} > V_{av} > V_{mp}$
b) $V_{mp} > V_{rms} > V_{av}$
c) $V_{av} > V_{rms} > V_{mp}$
d) $V_{mp} > V_{av} > V_{rms}$

34. According to kinetic theory of gases, the ratio of the root mean square velocity of molecular oxygen and molecular hydrogen at 300K is :
a) 1: 1

b) 1: 2
c) 1:4
d) 1:16

35. Species acting as both Bronsted acid and base is:
a) HSO_4^-
b) Na_2CO_3
c) NH_3
d) OH^-

36. An organic compound contains 4% Sulphur. Its minimum molecular weight is:
a) 200
b) 400
c) 800
d) 1600

37. Number of moles of $K_2Cr_2O_7$ reduced by 1 mole of Sn^{2+} is:
a) 1/3
b) 1/6
c) 2/3
d) 1

38. Reimer-Tiemann reaction involves an intermediate:
a) Carbocation
b) Carbene
c) Carbanion
d) Free radical

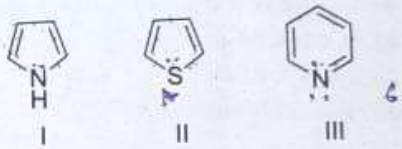
39. Among the following compounds, the most acidic is:
a) p-Nitrophenol
b) p- Hydroxybenzoic acid
c) o- Hydroxybenzoic acid
d) p-Toluic acid

40. In a reaction, $Na_2S_2O_3$ is converted to $Na_2S_4O_6$. The equivalent weight of $Na_2S_2O_3$ for this reaction is (mol. wt. of $Na_2S_2O_3$ = M):
a) M
b) M/4
c) M/2
d) M/3

41. In volumetric analysis , the point at which the indicator changes color is called :
a) Equivalence point
b) Titration point
c) End point
d) Saturation point

42. Benzene cannot be iodinated with I_2 directly. However, in presence of oxidants such as HNO_3, iodination is possible. The electrophiles formed in the case is:
a) $[I^+]$
b) $[I^-]$
c) $[I^{+\delta}...O^{+\delta}H_2]^+$
d) $[I^{-\delta}...O^{-\delta}H_2]^+$

43. The decreasing order of the reactivity of the following compounds towards electrophile is:



I II III

a) II > I > III
b) II > III > I
c) III > I > II
d) I > II > III

44. The most abundant element in earth's crust is :
a) Aluminium
b) Iron
c) Silicon
d) Oxygen

45. Which of the following processes is used to extract highly reactive metals, such as sodium, potassium and calcium from their compounds?
a) Roasting
b) Reduction with carbon
c) Froth flotation
d) Electrolysis of molten compounds

46. Which method is commonly used for the extraction of a metal from its sulphide ore?
a) Electrolysis of molten ore
b) Reduction with aluminium
c) Roasting followed by reduction
d) Magnetic separation

47. o-bromophenol is readily prepared from phenol using following conditions:
a) (i) $(CH_3CO)_2O$ (ii) Br_2 (iii) HCl-H_2O, Δ
b) (i) H_2SO_4, 100 °C (ii) Br_2 (iii) H_3O^+, 100 °C
c) N-Bromosuccinimide, dibenzoyl peroxide CCl_4, Δ
d) $Br_2/FeBr_3$

48. The correct order of stability for the following carbocation is:

a) I < III < IV < II
b) III < II < IV < I
c) II < IV < III < I
d) IV < III < I < II

49. 2 mol of Al reacts with 3 mol of O_2. How many moles of Al_2O_3 are thus formed?
(Reaction: $4Al + 3O_2 \rightarrow 2Al_2O_3$)
a) 1 mol
b) 1.5 mol
c) 2 mol
d) 3 mol

50. What is the equivalent mass of phosphoric acid (H_3PO_4) in its reaction with NaOH when only two protons are neutralized?
(Molar mass of H_3PO_4 = 98 g/mol)
a) 98
b) 49
c) 32.7
d) 24.5

51. Bohr's model fails to explain which of the following phenomena?
a) The hydrogen spectrum in the ultraviolet region
b) The fine structure in atomic spectra
c) The discrete energy levels of the hydrogen atom
d) The Balmer series in visible light

52. If the position of an electron is known within ±0.1 nm, what is the minimum uncertainty in its momentum?
a) $h/4\pi\times0.1$
b) $h/2\times0.1$
c) $h/2\pi\times0.1$
d) $h/0.1$

53. Which group of elements shows both high electronegativity and high ionization energy?
a) Alkali metals
b) Alkaline earth metals
c) Halogens
d) Noble gases

54. Which of the following orders of atomic radius is correct?
a) Na > K > Rb
b) Li < Na < K
c) F > Cl > Br
d) N > C > B

55. Which of the following elements has the most exothermic electron gain enthalpy?
a) Fluorine
b) Oxygen
c) Chlorine
d) Nitrogen

56. Redox reaction occurs in which of the following?
a) Acid-base neutralization
b) Precipitation reactions
c) Combustion reactions
d) Dissolution of sugar in water

57. The equivalent weight of H_2SO_4 in the reaction $H_2SO_4 + 2NaOH \rightarrow Na_2SO_4 + 2H_2O$ is:
a) Molar mass of H_2SO_4
b) ½ × molar mass of H_2SO_4
c) 2 × molar mass of H_2SO_4

d) Can't be defined

58. In redox titration involving $KMnO_4$ and $FeSO_4$, the color change at endpoint is:
a) Colorless to pink
b) Pink to colorless
c) Yellow to blue
d) Green to red

59. Which of the following changes will shift the equilibrium to the right for the reaction:

$2NO_2(g) \rightarrow N_2O_4(g)$, $\Delta H = -58$ kJ/mol

a) Increase temperature
b) Increase pressure
c) Add inert gas at constant pressure
d) Remove N_2O_4

60. At 60°C, the ionic product of water is 1.0×10^{-13}. What is the pH of neutral water at this temperature?
a) 7.00
b) 6.50
c) 6.00
d) 7.36

BOTANY

61. The name Bentham and Hooker is associated with :
a) Binomial System of Nomenclature
b) Artificial System of Classification
c) Natural System of Classification
d) Phylogenetic System of Classification

62. Mesophytes are group of plants that love to grow in/on:
a) Water
b) Rock
c) Land
d) Sand

63. Cyclic Photophosphorylation in photosynthesis leads to production of:
a) ATP and $NADPH_2$
b) ATP
c) $NADPH_2$
d) ATP , $NADPH_2$ and O_2

64. Coralloid roots are seen with:
a) Cycas
b) Pinus
c) Psilotum
d) Gnetum

65. C4 plants are adapted to:
a) Wet climate
b) Temperate climate
c) Cold and hot climate
d) Hot and dry climate

66. The source of Oxygen liberated in Photosynthesis is:
a) CO_2
b) H_2O
c) Glucose
d) CO

67. The group of plants that produce seeds but lack flowers are:
a) Thallophyta
b) Bryophyta
c) Pteridophyta
d) Gymnosperm

68. A group of similar plants that normally breed freely among themselves is a :
a) Genus
b) Species
c) Family
d) Order

69. Circinate vernation is associated with:
a) Ferns
b) Rhynia
c) Riccia
d) Funaria

70. The Public document that records endangered species of plants and animals is:
a) Green data book
b) Grey data Book
c) Red data Book

d) Brown data Book

71. The first stable compound in C3 cycle of Photosynthesis is:
a) Glucose
b) PGAL
c) PGA
d) Fructose 1,6-diphosphate

72. The carotenoid pigments protect the plants from:
a) Photo-oxidation
b) Photosynthesis
c) Desiccation
d) Photorespiration

73. The photoperiodic behaviour of plants is mediated by a pigment known as:
a) Cytochrome
b) Phytochrome
c) Ferrochrome
d) Florigen

74. Ethylene is a:
a) Solid hormone
b) Liquid hormone
c) Semisolid hormone
d) Gaseous hormone

75. Heartwood in plants is a:
a) Living tissue
b) Growing tissue
c) Decomposed tissue
d) Dead tissue

76. The Dihybrid cross ratio of 9:3:3:1 represents the:
a) Genotypic ratio
b) Phenotypic ratio
c) Both genotypic and phenotypic ratio
d) Allelic ratio

77. Elaters seen in Bryophytes are responsible for:
a) Spore development
b) Spore multiplication
c) Spore dispersal
d) Spore germination

78. Conjoint,collateral and open vascular bundles are seen in:
a) Monocot stem
b) Dicot root
c) Monocot root
d) Dicot stem

79. Photorespiration takes place in:
a) Chloroplast
b) Mitochondria
c) Mitochondria and Chloroplast
d) Chloroplast, Mitochondria and Peroxisomes

80. Casparian strips are seen with:
a) Epidermis
b) Endodermis
c) Pericycle
d) Periderm

81. Vascular Cambium is a/ an:
a) Apical meristem
b) Intercalary meristem
c) Lateral meristem
d) Secondary meristem

82. Mechanical tissue consisting of living cells is:
a) Collenchyma
b) Chlorenchyma
c) Parenchyma
d) Sclerenchyma

83. Monocot plants lack secondary growth because they have:
a) Scattered open vascular bundle
b) Cambium
c) Bundle sheath
d) Closed vascular bundles

84. In Dicot plants, Tyloses are seen in:
a) Cambium
b) Secondary xylem
c) Secondary phloem
d) Cork cambium

85. Plant cells without nuclei are seen with:
a) Sieve tubes
b) Cambium
c) Companion cells
d) Vessel element

86. Soyabean is a:
a) Short day plant
b) Long day plant

c) Day neutral plant
d) Day independent plant

87. Abscisic acid promotes:
a) Cell elongation
b) Leaf fall
c) Budding
d) Germination

88. 2,4-D is a/ an:
a) Insecticide
b) Pesticide
c) Rodenticide
d) Herbicide

89. Plant Physiologist, F.W. Went is linked to:
a) Fruit ripening
b) Oat coleoptile
c) Long day plant
d) Short day plant

90. The hormone that causes stunted growth in pea is:
a) Auxin
b) Gibberellin
c) Ethylene
d) Cytokinin

91. First of all, Double fertilization in plants was described by:
a) Hofmeister
b) Nawaschin
c) Robert Hooke
d) Strasburger

92. Most commonly a mature embryo sac is:
a) One celled with eight nuclei
b) Two celled with eight nuclei
c) Two celled with seven nuclei
d) Eight celled with eight nuclei

93. A Parthenocarpic fruit is produced:
a) without fertilization
b) without seeds
c) with immature seeds
d) without pericarp

94. Oogamous sexual reproduction is seen with:
a) Chlorella
b) Chara
c) Chlamydomonas
d) Bacteria

95. After fertilization usually:
a) Ovule forms the seed and ovary forms the fruit
b) Ovule forms the fruit and ovary forms the seed
c) Ovary forms the seed and thalamus forms the fruit
d) Ovule forms the seed and thalamus forms the fruit

96. Tissue culture of apical meristems helps in the production of:
a) Fast growing plants
b) Haploid plants
c) Early flowering plants
d) Virus free plants

97. Alleles are the alternate forms of:
a) Gene
b) Genome
c) Character
d) Zygote

98. Recessive genes can be expressed in:
a) Homozygous condition
b) Heterozygous condition
c) Both homozygous and heterozygous condition
d) Heterotrophic condition

99. According to the Law of Segregation, two alleles responsible for a character unite at fertilization and separate in:
a) Mitosis
b) Meiosis
c) Amitosis
d) Crossing over

100. When two pairs of factors affect the same character, with individuals having the same visible effect and their interaction produces a different effect, the phenomenon is called:
a) Inhibitory factor
b) Supplementary factor
c) Complementary factor
d) Duplicate factor

101. When a gene pair masks the expression of another non-allelic gene, the phenomenon is termed as:
a) Epistasis
b) Hypostasis
c) Suppressive
d) Inhibitory

102. The symptoms of Blast of rice is:
a) Dark round lesions on leaves
b) Corky layers on glumes
c) Bluish green necrotic lesions
d) Black lesions on the leaves

103. In the Black stem rust of wheat ,the secondary host Barberry plant produces:
a) Aecia
b) Conidia
c) Telia
d) Uredia

104. *Erysiphe graminis* predominantly spreads powdery mildew disease by:
a) Endospores
b) Exospores
c) Conidia
d) Conidiophores

105. *Phytophthora infestans* , the causal agent of Late blight of Potato is a fungus that belongs to the class :
a) Phycomycetes
b) Ascomycetes
c) Basidiomycetes
d) Deuteromycetes

ZOOLOGY

106. The specific hormone maintained at high level during hormonal method of birth control is:
a) Progesterone
b) LH
c) FSH
d) LTH

107. The hormone Calcitonin is secreted by:
a) Pituitary gland
b) Thyroid gland
c) Parathyroid gland
d) Adrenal gland

108. The part of the brain responsible for controlling heartbeat is:
a) Cerebellum
b) Cerebrum
c) Medulla oblongata
d) Axon

109. The chemical secreted from the Synaptic vesicles at the neuromuscular junction is:
a) Adrenaline
b) Dopamine
c) Acetylcholine
d) Estradiol

110. The Non-myelinated part of the neuron is:
a) Node of Ranvier
b) Dendrite
c) Axon-telodendria
d) Dendron

111. The process of formation of three germ layers starts from the stage of :
a) Morula
b) Blastula
c) Gastrula
d) Nerula

112. After ovulation, the granulosa and interstitial cells form a mass of cells known as :
a) Graafian follicles
b) Corpus luteum
c) Corpus albicans
d) Ovarian Follicle

113. Based on the amount and pattern of distribution of yolk ,the two types of cleavages seen are:
a) Holoblastic and Triploblastic
b) Holoblastic and Meroblastic
c) Determinant and Indeterminant

d) Meroblastic and Triploblastic

114. The number of spermatozoa produced by a secondary spermatocyte is:
a) 2
b) 4
c) 1
d) 8

115. Monocytes come under the group of:
a) Erythrocytes
b) Leukocytes
c) Granulocytes
d) Lymphocytes

116. The main component of blood plasma is:
a) Platelets
b) Erythrocytes
c) Thrombocytes
d) Water

117. The heart chamber that receives deoxygenated blood from the body is:
a) Right atrium
b) Right ventricle
c) Left atrium
d) Left ventricle

118. The right atrio-ventricular orifice is guarded by:
a) Tricuspid valve
b) Mitral valve
c) Bicuspid valve
d) Semilunar valve

119. The region from which the hepatic portal system collects blood is:
a) Kidney
b) Heart
c) Intestine
d) Liver

120. The type of blood cell that lacks a nucleus is:
a) Erythrocytes
b) Leukocytes
c) Lymphocytes
d) Eosinophils

121. Renewable source of energy is:
a) Kerosene
b) Petroleum
c) Coal
d) Biomass

122. Eco-friendly method involves:
a) Plantation of C3 plants
b) Plantation of Sugarcane
c) Plantation of Energy Crops
d) Burning of Residues

123. Ozone hole is caused by:
a) Methane
b) Ethylene
c) Chlorofluorocarbon
d) Acetylene

124. The Great Indian Bustard is a :
a) Rare species
b) Vulnerable species
c) Critically endangered species
d) Flourishing species

125. In Biosphere reserves, human activity is not allowed in:
a) Buffer Zone
b) Core Zone
c) Manipulative Zone
d) Peripheral Zone

126. Cellular respiration is carried out in:
a) Chloroplast
b) Mitochondria
c) Golgi bodies
d) Ribosomes

127. The common pathway between aerobic and anaerobic respirations is:
a) Glycolysis
b) Krebs Cycle
c) Calvin Cycle
d) Kris cycle

128. The Embden- Meyerhof pathway is the other name of
a) Gluconeogenesis
b) Krebs cycle
c) Glycogenesis
d) Glycolysis

129. Respiration is a /an:
a) Anaerobic process
b) Catabolic process
c) Metabolic process
d) Numeric process

130. The total number of ATP molecules produced in anaerobic respiration is:
a) 2
b) 3
c) 4
d) 6

131. Four chambered heart is not seen with:
a) Birds
b) Crocodile
c) Fishes
d) Mammals

132. The function of the lateral line system in fish is:
a) Reproduction
b) Maintaining buoyancy
c) Respiration
d) Sensing vibrations

133. One key characteristic that is shared by all chordates at some point of development is :
a) Post - anal tail
b) Lateral line system
c) Air bladder
d) One celled heart

134.Prokaryotic and Eukaryotic cells have the same:
a) Genetic code
b) Histone
c) Non-histone
d) Mitochondria

135. Mitochondrial DNA has higher :
a) AU content
b) AT content
c) GC content
d) GA content

136. Animal cells are interconnected by:
a) Cell wall
b) Plasma membrane
c) Desmosomes
d) Plasmodesmata

137. The Nitrogenous base not found in RNA is:
a) Uracil
b) Thymine
c) Cytosine
d) Guanine

138. In double stranded DNA, two strands are held together by forming:
a) Hydrogen bonds
b) Covalent bonds
c) Phosphodiester bond
d) Ionic bond

139. Pairing of homologous chromosomes takes place at the substage of:
a) Leptotene
b) Diakinesis
c) Pachytene
d) Zygotene

140. The classic example of point mutation is:
a) Haemophilia
b) Color blindness
c) Sickle cell anemia
d) Thalassemia

141.Female heterogametic and male homogametic conditions are seen in:
a) Cockroach
b) Human being
c) Peacock
d) Leech

142.Recombination takes place between:

a) Sister chromatids of homologous chromosomes
b) Non-sister chromatids of homologous chromosomes
c) Sister chromatids of heterologous chromosomes
d) Non-sister chromatids of heterologous chromosomes

143. Bowman's Capsule is located in:
a) Renal cortex
b) Henle's loop
c) Renal medulla
d) Urinary bladder

144. If PCT is removed from the Nephron, the result will be :
a) Urine becomes more concentrated
b) Urine becomes more diluted
c) Urine is not formed
d) Quantity of urine is unaffected

145. The reabsorption /recovery of water and salt from the glomerular filtrate mostly occurs at:
a) Proximal convoluted tubule
b) Distal convoluted tubule
c) Glomerulus
d) Loop of Henle

146. The chemical name of Vitamin B1 is:
a) Lipoic acid
b) Pyridoxine
c) Thiamine
d) Riboflavin

147. The food components essential for growth and maintenance of our body are :
a) Fat and Vitamins
b) Fat and Minerals
c) Protein and Vitamins
d) Carbohydrate and Vitamins

148. Failure of the descent of testes into the scrotal sac is known as :
a) Cryptorchidism
b) Castration
c) Anorchidism
d) Impotency

149. The terminal end of spinal cord is called :
a) Filum terminale
b) Ependyma
c) Coccyx
d) Conus medullaris

150. Modern synthetic theory puts stress on the evolution of life in terms of:
a) Genetic changes
b) Geographical characters
c) Alteration of acquired characters
d) Inheritance of acquired characters