

MHT CET 2018 Paper 3 Biology Memory Based Question Paper PDF

1. Cambium is essential for grafting in plants because
 - (1) Cambia of both stock and scion fuse together
 - (2) Cambium produces new leaves
 - (3) Cambium produces new roots
 - (4) Cambium helps in the production of flowers
2. Which one of the following carbohydrates is a heteropolysaccharide?
 - (1) Cellulose (2) Starch (3) Glycogen (4) Hyaluronic acid
3. 'Pusa Sadabahar' is resistant to disease.
 - (1) Leaf curl and chilli mosaic virus (2) Leaf and stripe rust
 - (2) Black rot (4) Curl blight black rot
4. The adsorption of water by hydrophilic compounds like cellulose and pectin in root hair cell wall is called
 - (1) Diffusion (2) Imbibition (3) Guttation (4) Osmosis
5. In Krebs's cycle, the conversion of oxalosuccinate into α -ketoglutarate involves
 - (1) Oxidation (2) Reduction (3) Hydration (4) Decarboxylation
6. Double fertilization in angiosperms was first discovered by S.G. Nawaschin in plants.
 - (1) *Lillium* (2) Sunflower (3) Wheat (4) Mango
7. Oxidative phosphorylation in eukaryotes occurs during _____.
 - (1) Photosynthesis (2) Protein synthesis (3) Lipid synthesis (4) Respiration
8. Snapdragon is an example of gene interaction.
 - (1) Co-dominance (2) Multiple alleles (3) Incomplete dominance (4) Polygenic inheritance
9. In one nucleosome, which one of the following histone molecule is **NOT** double?
 - (1) H_4 (2) H_3 (3) H_2 (4) H_1
10. Which one of the following is **NOT** true about *Salvia* flower?
 - (1) Flowers are bisexual
 - (2) Flowers are protandrous

- (3) The upper branch of bifurcated connective bears sterile anther lobe and lower branch bears fertile anther lobe
 - (4) The upper branch of bifurcated connective bears fertile anther lobe and lower branch bears sterile anther lobe
- 11.** Identify the **INCORRECT** statement regarding Bt Cotton.
- (1) Dried spores of *Bacillus thuringiensis* are sprayed on its vulnerable leaves
 - (2) It releases toxin that causes swelling in the gut of insect that ingest its leaves
 - (3) It is a transgenic plant
 - (4) It can produce toxin due to gene introduced in it by transgenesis
- 12.** In angiosperms, the fusion of male gamete with the secondary nucleus is considered as "Second fertilization" because
- (1) It is fusion of two nuclei
 - (2) Secondary nucleus is a sister nucleus of the egg
 - (3) It takes place in embryo sac
 - (4) It takes place after pollination
- 13.** In *Mirabilis jalapa*, when red and white varieties are crossed, the hybrid obtained will be ____ pink.
- (1) 25% (2) 50% (3) 75% (4) 100%
- 14.** During r-DNA technology, which one of the following enzymes is used for cleaving DNA molecule?
- (1) Exonuclease (2) Endonuclease (3) Restriction endonuclease (4) Helicase
- 15.** Chipko Movement took place in
- (1) Montreal (2) Jodhpur (3) Bangalore (4) Garhwal Himalayas
- 16.** In plants, Richmond-Lang effect is
- (1) Delaying the onset of senescence by application of cytokinin
 - (2) Prevention of abscission of leaves and flowers by auxin application
 - (3) Increasing commercial value of leafy vegetables by inducing leaf expansion through gibberellin application
 - (4) Breaking dormancy of seeds and buds through application of ethylene
- 17.** In a person suffering from sickle cell anaemia, the _____ becomes half moon shaped.
- (1) RBC (2) Thrombocyte (3) Monocyte (4) Lymphocyte
- 18.** Which one of the following is true about respiration in green plants? Respiration takes place _____.

- (1) Only when stomata are open
 - (2) Only when photosynthesis stops
 - (3) Only when photosynthesis is in progress
 - (4) Throughout life
19. In eukaryotes, the anticodon of tRNA that pairs with the start codon of mRNA during translation is
- (1) UAA (2) UCA (3) UAC (4) UUU
20. Biopatent is granted for biological entities by authority of a country.
- (1) Government (2) Educational institute (3) Scientist (4) Business
21. The exine of pollen grain is made up of
- (1) Chitin (2) Cellulose (3) Sporopollenin (4) Hemicellulose
22. Continuous upward flow of water stream in tall trees is maintained due to
- (1) Guttation and transpiration
 - (2) Transpiration pull only
 - (3) Cohesive force between H_2O molecules only
 - (4) Cohesive force between H_2O molecules and transpiration pull
23. Which of the following is **NOT** correct regarding plasmids?
- (1) They are small, extra chromosomal circular form of DNA
 - (2) They are naturally found in bacteria only
 - (3) They are 'replicons' capable of autonomous replication within a suitable host
 - (4) They carry genes related to survival and reproduction of carrier bacterium under unfavourable conditions
24. Algae used for the discovery of path of carbon in dark reaction were _____.
- (1) *Spirogyra* and *Chlorella* (2) *Spirulina* and *Desmodesmus*
 - (2) *Chlorella* and *Scenedesmus* (4) *Spirogyra* and *Spirulina*
25. Which one of the following is **NOT** a plant like protist?
- (1) Desmid (2) Dinoflagellate (3) Diatom (4) Slime mould
26. In case of anaerobic respiration, the RQ is
- (1) Always less than one (2) Always more than one (3) Always infinity (4) Variable on the basis of substrate
27. Which one of the following is **NOT** true about self pollination?

- (1) A sure method (2) Most economic (3) Maintains genetic purity (4) Favours evolution
28. In biogas plant, the role of acidogenic bacteria is to.
- (1) Convert monomers to organic acids (2) Convert monomers to complex polymers
(2) Transform acetic acid to biogas (4) Digest fungi in the sludge
29. A part of photosynthetically fixed CO_2 goes back to the atmosphere due to
- (1) Cyclic photophosphorylation (2) Non-cyclic photophosphorylation
(2) Dark reaction (4) Photorespiration
30. When glucose is the normal energy source in bacterial cell _____ gene transcribes a repressor mRNA.
- (1) z (2) y (3) a (4) i
31. Which character of angiosperms helped in their dominance on earth?
- (1) Formation of seeds (2) Formation of endosperm (3) Double fertilization (4) Presence of xylem vessels
32. Identify the **WRONG** statement regarding the process in sewage treatment
- (1) Primary treatment is a physical process
(2) Secondary treatment is a biological process
(3) The BOD of effluent increases after secondary treatment
(4) The tanks used for tertiary treatment are anaerobic sludge digesters
33. A type of seed germination in which epicotyl region of embryo elongates rapidly to pull plumule out of the soil surface is called germination
- (1) Hypogeal (2) Epigeal (3) Viviparous (4) Invitro
34. In a dihybrid cross with contrasting characters, the number of different genotypes obtained in F_2 generation are
- (1) 16 (2) 9 (3) 6 (4) 4
35. Which one of the following is **NOT** caused by global warming?
- (1) Melting of glacier (2) Change in rainfall pattern
(2) Increase in sea level (4) Increase in crop production
36. During cyclic photophosphorylation, formation of ATP occurs between which of the following two compounds?
- (1) FRS $\rightarrow$ Ferredoxin (2) Cytochrome $b_6 \rightarrow$ Cytochrome f
(2) Cytochrome f $\rightarrow$ Plastocyanin (4) Plastocyanin $\rightarrow$ Ionised Chl - a

37. The development of male gametes in the pollen grains in angiosperms involves _____.
(1) Only one mitotic division (2) Two mitotic divisions
(2) Both mitotic and meiotic divisions (4) Only one meiotic division
38. In the system of classification, which one of the following is **NOT** a category?
(1) Kingdom (2) Series (3) Angiospermae (4) Genus
39. Mendel obtained pure lines by selfing yellow round seeds as female parent and green wrinkled as male parent for _____ generations.
(1) 2 (2) 3 (3) 4 (4) 5
40. The enzyme Taq polymerase used in PCR technique is obtained from
(1) *Salmonella typhimurium* (2) *Thermus aquaticus*
(2) *Rhizobium phaseoli* (4) *Bacillus thuringiensis*
41. Which one of the following is **NOT** true about vegetative propagation
(1) Easy and cheaper method (2) Rapid propagation
(2) Production of genetically similar plants (4) Production of genetically dissimilar plants
42. Which one of the following characteristic is **NOT** shown by a virus?
(1) They are acellular (2) They can be crystallised
(2) Active outside the hosts body (4) Have genetic material
43. The co-enzyme which acts as hydrogen acceptor during light reaction is _____.
(1) PQ (2) FAD (3) CO-Q (4) NADP
44. The sequential events that occur during protein synthesis are _____.
(1) Protein → Translation → Transcription → DNA
(2) DNA → Transcription → Translation → Protein
(3) Translation → Transcription → DNA → Protein
(4) DNA → Protein → Translation → Transcription
45. The net gain of ATP molecules during aerobic breakdown of one glucose molecule is _____.
(1) 40 (2) 38 (3) 36 (4) 30
46. The 'eyes' of potato are located at the _____.
(1) Root apex (2) Leaf apex (3) Nodes (4) Inter-nodes
47. Ozone layer in the stratosphere is _____ for plants and animals.

- (1) Good (2) Harmful (3) Providing protection from UV rays (4) Releasing more oxygen

48. Steroids are characterised by _____ in their structure.

- (1) Carbon atom arranged in four inter-locking rings
 (2) Magnesium atom arranged in the centre of tetrapyrrole
 (3) Two, six - carbon rings
 (4) Skeletal heterocyclic ring of hydrocarbons

49. Chl-a and Chl-b shown maximum absorption in _____ regions of visible light

- (1) Blue, violet and red (2) Red, indigo and green
 (3) Yellow, blue and red (4) Blue, violet and green

50. Explant used for the production of disease free plants is _____.

- (1) Vascular tissue (2) Apical meristem
 (3) Intrafascicular cambium (4) Cork cambium

51. Explant used for the production of disease free plants is _____.

- (1) Vascular tissue (2) Apical meristem
 (3) Intrafascicular cambium (4) Cork cambium

52. Match the Column I and II and select the appropriate option with the given code.

Column - I		Column - II	
(P)	Coronary sinus	(i)	Mitral valve
(Q)	Base of systemic aorta	(ii)	Eustachian valve
(R)	Left atrioventricular valve	(iii)	Semilunar valves
(S)	Opening of inferior vena cava	(iv)	Thebesian valve

- (1) P - iv, Q - iii, R - i, S - ii (2) P - iii, Q - iv, R - ii, S - i
 (3) P - ii, Q - i, R - iv, S - iii (4) P - i, Q - ii, R - iii, S - iv

53. Density of population increases when _____.

- (1) Mortality and emigration increases (2) Natality and emigration increases
 (3) Mortality increases and immigration decreases (4) Natality increases and emigration increases

54. Total number of linkage groups in honeybee is

- (1) 16 (2) 23 (3) 32 (4) 46

55. Hormone erythropoietin is produced by _____.

- (1) Heart (2) Kidney (3) Ovary (4) Pancreas

56. Co-enzymes of Electron Transport Chain in mitochondria are _____.

- (1) Cytochromes, dehydrogenases, flavoproteins (2) Cytochromes, catalases, peroxidases
(2) Hyaluronidases, dehydrogenases, hydrolases (4) Flavoproteins, anhydrases, phosphatases
57. In the second trimester of pregnancy, there is decline in the level of _____.
(1) ACTH (2) ICSH (3) HCG (4) MSH
58. Heavily built, short prehistoric man having cranial capacity of about 1450 C.C is _____.
(1) *Homo sapiens fossilis* (2) *Homo erectus*
(2) *Homo heidelbergensis* (4) *Homo neanderthalensis*
59. Ventrolateral walls of cerebrum are called _____.
(1) Crura cerebrii (2) Corpora lutea (3) Corpora quadrigemina (4) Corpora striata
60. Carbon monoxide combines with haemoglobin to form _____.
(1) Carbamino haemoglobin (2) Carbonic acid (3) Carboxyhaemoglobin (4) Cytochrome oxidase
61. In the given diagram of antibody [See Image], 'X' indicates _____.
(1) Constant region of heavy chain (2) Antigen binding site
(2) Disulphide bond (4) Light chain
62. The termination of process of oogenesis is indicated by formation of _____.
(1) Secondary oocyte (2) First polar body (3) Second polar body (4) Perivitelline space
63. Dr. Lalji Singh obtained radioactive DNA probe from Y chromosome of _____.
(1) Female drosophila (2) Female banded krait
(2) Male drosophila (4) Male banded krait
64. Which one of the following is **NOT** the in-situ conservation of biodiversity?
(1) Zoological parks (2) Wildlife sanctuaries (3) National parks (4) Biosphere reserves
65. Which of the following is a unicellular gland?
(1) Goblet cell (2) Kupffer's cell (3) Pedicel (4) Neuroglial cell
66. In ovary, estrogen is secreted by _____.
(1) Follicular cells (2) Corona radiata cells (3) Sertoli cells (4) Primary oocyte
67. Select the **CORRECT** statement.
(1) Sex-linked traits appear more frequently in females
(2) Colour blindness is caused due to proper formation of colour sensitive cells

- (3) Human females have double dose of X chromosome
(4) Drone bees produce sperms by meiosis
68. Heart attack is also called _____.
(1) Arteriosclerosis (2) Angina pectoris (3) Bradycardia (4) Myocardial infarction
69. Molecular evolution and origin of life occurred in _____ Era.
(1) Archeozoic (2) Cenozoic (3) Palaeozoic (4) Proterozoic
70. The part labelled 'X' in given diagram of T.S. of adrenal gland [See Image] secretes _____.
(1) Calcitonin (2) Catecholamines (3) Cortisol (4) Mineralocorticoids
71. Given below are cell organelles and their functions. Select the **INCORRECT** match.
(1) Lysosome — Phagocytosis (2) Centriole — Spindle formation
(2) Sphaerosomes — Storage and synthesis of fats (4) Leucoplast — Photosynthesis
72. An extra sex chromosome is present in _____.
(1) Turner's syndrome (2) Thalassemia (3) Klinefelter's syndrome (4) Down's syndrome
73. Given below is the diagram of Animal cell [See Image]. Select option giving correct identification of labels X and Y respectively.
(1) X - Smooth endoplasmic reticulum, Y - Rough endoplasmic reticulum
(2) X - Microvilli, T - Golgi apparatus
(3) X - Endoplasmic reticulum, Y - Mitochondria
(4) X - Centrioles, Y - Microvilli
74. Parasympathetic ganglia are located _____.
(1) In cortex of cerebrum (2) In medulla of cerebellum
(2) On the side of visceral organs (4) On either side of vertebral column
75. One of the following groups of enzymes forms contents of succus entericus
(1) Maltase, Enterokinase, Trypsin (2) Trypsin, Pepsin, Lactase
(2) Nuclease, Amylase, Chymotrypsin (4) Sucrase, Maltase, Dipeptidase
76. Adam's apple is also called _____.
(1) Vestibule (2) Pharynx (3) Osteon (4) Larynx
77. In the following diagram of T.S. of Artery [See Image], the region marked 'X' is _____.
(1) Tunica media (2) Tunica externa (3) Tunica interna (4) Tunica albuginea

78. Which of the following processes is initiated by FSH?
- (1) Degeneration of endometrium (2) Growth of Graafian follicle
(2) Maturation of spermatozoa (4) Secretion progesterone
79. The immunity developed by a child after attack of measles is _____ immunity.
- (1) Natural acquired active (2) Artificial acquired active
(2) Natural acquired passive (4) Artificial acquired passive
80. As an example of adaptive radiation, Darwin observed a variety of Finches in _____.
- (1) South Africa (2) Madagascar (3) Galapagos Islands (4) East Indies
81. Following are various symptoms of Marasmus **EXCEPT** _____.
- (1) Oedema of lower legs and face (2) Dry, wrinkled skin
(2) Extreme leanness (4) Atrophy of digestive glands
82. Which of the following is **NOT** a connecting link?
- (1) *Archaeopteryx* (2) *Dryopithecus* (3) *Ichthyostegia* (4) *Seymouria*
83. Oogonia arise from the endoderm of the _____.
- (1) Allantois (2) Chorion (3) Trophoblast (4) Yolk-sac
84. Lacteals absorb _____.
- (1) Amino acids (2) Fatty acids and glycerol (3) Glucose and fructose (4) Amylose and maltose
85. In the given diagram of Malpighian body [See Image], blood is filtered from part labelled _____.
- (1) L (2) M (3) N (4) O
86. Majority of kidney stones consist crystals of _____.
- (1) Calcium oxalate, sodium bicarbonate (2) Calcium oxalate, calcium phosphate
(2) Calcium phosphate, sodium chloride (4) Calcium carbonate, copper sulphate
87. Each testicular lobule contains _____ convoluted seminiferous tubules.
- (1) 1 to 4 (2) 5 to 7 (3) 8 to 10 (4) 11 to 14
88. Select the **INCORRECT** statement with reference to DNA fingerprinting. It is _____.
- (1) PCR based technique (2) Based on fingerprints of individual
(2) Used in forensic medicine technique (4) Used to test paternity
89. Lac is used in the manufacture of following products **EXCEPT** _____.

- (1) Toys (2) Polish (3) Isinglass (4) Ink

90. Which of the following group of animals is guanotelic?

- (1) Labeo, Turtle, Camel (2) Lizard, Snake, Scorpion
(2) Penguin, Spider, Scorpion (4) Spider, Scorpion, Snake

91. Which of the following is an avascular tissue?

- (1) Connective (2) Epithelial (3) Muscular (4) Nervous

92. Protein $\alpha - 1$ - antitrypsin is used to treat _____.

- (1) Alzheimer's disease (2) Cancer (3) Emphysema (4) Rheumatoid Arthritis

93. In the menstrual cycle, the level of progesterone reaches its maximum in the _____.

- (1) Secretory phase (2) Proliferative phase (3) Ovulatory phase (4) Menstrual phase

94. Mice are most successfully produced transgenic animals due to following:

- (1) Hypo ovulation in estrous cycle (2) Difficulty in reimplantation
(2) Production of 2-3 young ones (4) Short generation time

95. Pneumatic bones and left sided ovary is characteristic feature of _____ adaptation.

- (1) Arboreal (2) Aerial (3) Cursorial (4) Fossorial

96. Regeneration as a method of asexual reproduction is observed in _____.

- (1) *Ascaris* (2) *Planaria* (3) Prawn (4) *Salmonella*

97. Branching tree like processes of white matter extending into grey cortex of cerebellum is called _____.

- (1) Arbor vitae (2) Gyri (3) Crura cerebrii (4) Thalami

98. In the given diagram of mammalian bone [See Image], X indicates _____.

- (1) Bone marrow (2) Haversian canal
(2) Inner circumferential lamella (4) Volkmann's canal

99. All of the following are marine Fish **EXCEPT** _____.

- (1) *Cirrhinia* (2) *Herpedon* (3) *Sardinella* (4) *Rastrelliger*

100. Heroin is extracted from the latex of plant _____.

- (1) *Atropa belladonna* (2) *Claviceps purpurea*
(2) *Erythroxylum coca* (4) *Papaver somniferum*