MHT CET 2023 PCB May 19 Shift 1

Question Paper

Conducted by the State Common Entrance Test Cell, Maharashtra

Time Allowed: 180 Minutes **PCB Group** **Maximum Marks: 200**

General Instructions

(i) This is a **memory-based version** of the **MHT CET 2023 PCB May 19 Shift 1** (PCB group), conducted by the **State Common Entrance Test Cell, Maharashtra**. The questions were recalled by candidates who appeared in the exam.

(ii) This edition includes **100 of 200 questions**: **100 Biology**. Physics and Chemistry questions are unavailable. Original subject question numbers are retained.

(iii) The full PCB exam has **200 questions** and **200 marks**: Section 1 - **Physics and Chemistry** (50 questions each, 100 marks), followed by Section 2 - **Biology** (100 questions, 100 marks). Each section lasts **90 minutes**.

(iv) Candidates cannot switch between sections. Section 1 closes automatically after its 90 minutes, and Section 2 follows.

(v) All questions in the exam are compulsory. Each multiple choice question offers **four options**, of which **exactly one is correct**.

(vi) Each correct answer earns **1 mark**. There is **no negative marking**; unanswered questions carry 0 marks.

(vii) Use rough sheets for calculations and rough work. Calculators, log tables and electronic gadgets are not allowed.

Section 2 · Biology · 100 available questions

1. Amazon forest produces _____ percentage of total oxygen of earth's atmosphere.

(A) 20% (B) 30%
(C) 40% (D) 50%

2. Which of the following statements are correct with respect to embryonic development in humans?
i. Cleavage is holoblastic and indeterminate.
ii. There is no change in overall size of zygote upto morula.
iii. Embryo called blastocyst remains floating in uterine cavity for 2 to 4 days, after its entry into uterus.
iv. Embryo proper develops from trophoblast cells and cells of Rauber.
v. Zona pellucida remains intact around embryo till late gastrula stage.
Choose the correct option.

(A) i and ii only (B) iv and v only
(C) i, ii and iii only (D) i, ii, iii and iv only

3. Louis Pasteur disproved the theory of _____.

(A) special creation (B) panspermia
(C) abiogenesis (D) biogenesis

4. Volatile substances, present in spices, are excreted through _____.

(A) lungs (B) liver
(C) kidneys (D) skin

5. Which one of the following is INCORRECT with respect to genetic drift?

(A) It is any alteration in allele frequency.
(B) It occurs in a population by pure chance.
(C) They are random or directionless.
(D) Effect of genetic drift has no significance in small populations.

6. A diffused nervous system is observed in _____.

(A) sponge (B) cnidarian
(C) flatworm (D) earthworm

7. Archaeopteryx lithographica, a fossilized crow size toothed bird, was found from Jurassic rocks in _____.

(A) Galapagos Islands (B) Germany
(C) South Africa (D) Java and Peking

8. In a normal healthy person, glomerular filtrate entering the PCT does NOT contain _____.
i. Plasma proteins
ii. Blood corpuscles
iii. Glucose
iv. Vit. C
v. NaCl

(A) i and iii only (B) i and ii only
(C) iii and v only (D) ii and iii only

9. Which one of the following is the palindromic sequence recognized by the enzyme EcoRI?

(A) 5'.....A - G - C - T .....3'
3'.....T - C - G - A .....5'
(B) 5'.....G - G - A - T - C - C .....3'
3'.....C - C - T - A - G - G .....5'
(C) 5'.....G - A - A - T - T - C .....3'
3'.....C - T - T - A - A - G .....5'
(D) 5'.....G - T - C - G - A - C .....3'
3'.....C - A - G - C - T - G .....5'

10. Percentage of CO2 transport by RBCs and plasma, in the form of carbonic acid, NaHCO3 ions and carbaminohaemoglobin respectively is _____

(A) 7%, 70%, 23% (B) 70%, 23%, 7%
(C) 23%, 7%, 70% (D) 7%, 23%, 70%

11. As per new fuel policy implemented by the government, the norms are set to reduce _____ and _____ from petrol and diesel.

(A) S, CO2 (B) S, aromatic content
(C) Nitrous oxide, CO (D) SO2, CO

12. Which is the main organ of plant responsible for absorption of water and minerals?

(A) Root (B) Stem
(C) Leaf (D) Fruit

13. Heart beat decreases in the following conditions EXCEPT _____.

(A) acidosis and alkalosis
(B) hypoxia
(C) elevated levels of K+ and Na+ in blood
(D) increase in level of hormone epinephrine

14. Match types of biofertilizers in column I with their examples in column II.
Column I (Biofertilizers) | Column II (Examples)
i. Nitrogen fixing | a. *Pseudomonas striata*
ii. Phosphate solubilizing | b. actinobacteria
iii. Compost making | c. mycorrhizae
iv. Fungal biofertilizer | d. *Klebsiella*

(A) i - d, ii - a, iii - c, iv - b
(B) i - d, ii - a, iii - b, iv - c
(C) i - a, ii - d, iii - c, iv - b
(D) i - a, ii - d, iii - b, iv - c

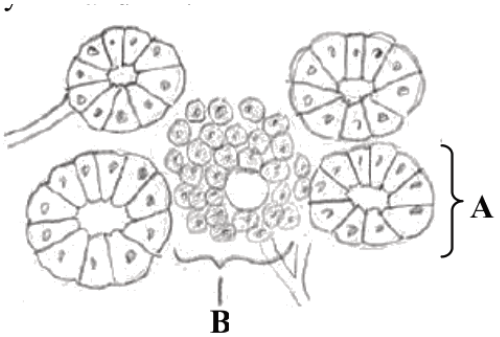
15. Which of the following are low threshold substances with respect to selective reabsorption?

(A) Ca++, Na+ and Cl-.
(B) Water, sulphates and nitrates.
(C) Glucose and amino acids.
(D) K+ and Vit. C.

16. Which one of the following is NOT the reason of indigestion?

(A) Food poisoning
(B) Over-eating
(C) Roughage
(D) Spicy food

17. In the following diagram of T.S. of pancreas, identify 'A' and 'B'.
A | B



(A) A: Acinar cells | B: Cells of Islets of Langerhans
(B) A: Goblet cells | B: C-cells
(C) A: Kupffer cells | B: Leydig cells
(D) A: Hepatic cells | B: J G cells

18. Given below are the statements regarding enzymes. Choose the correct statements.
i. All enzymes are proteinaceous.
ii. Enzyme becomes more active at the temperature of 60° to 70° C.
iii. Enzymes have one or two active sites where substrate binds with the enzyme.
iv. Any increase or decrease in specific pH, enzyme activity is always enhanced.
v. Enzymes remain active to catalyze again after completion of first reaction.

(A) ii and iv only
(B) i and v only
(C) i, iii and v only
(D) ii, iii and v only

19. Match the Column I with Column II.
Column I (Animals) | Column II (Excretory substances)
i. Adult Frog | a. Guanine
ii. Land snail | b. Urea
iii. Tadpole of frog | c. Uric acid
iv. Spider | d. Ammonia

(A) i - b, ii - c, iii - a, iv - d
(B) i - b, ii - c, iii - d, iv - a
(C) i - c, ii - b, iii - d, iv - a
(D) i - c, ii - b, iii - a, iv - d

20. _____ is a problem of synthesizing few alpha (α) and beta (β) globin molecules in haemoglobin.

(A) Phenylketonuria
(B) Thalassemia
(C) Sickle cell anaemia
(D) Haemophilia

21. Which hormone is used to increase fruit size and bunch length of grapes?

(A) Auxins
(B) Gibberellins
(C) Cytokinins
(D) Ethylene

22. Semen contains _____ and _____, that are antibacterial in nature, hence it provides natural immunity.

(A) lysozyme and serum amyloid P
(B) spermine and zinc
(C) interferons and cytokines
(D) C-Reactive Protein and alpha-1-acid glycoprotein

23. Nasal cavity is divisible into right and left nasal chambers by _____.

(A) thyroid cartilage
(B) mesethmoid cartilage
(C) tracheal cartilage
(D) thyrohyoid membrane

24. Which one of the following is NOT a part of anther wall?

(A) Tapetum
(B) Endothecium
(C) Integument
(D) Middle layers

25. Which one of the following is NOT a homologous pair with respect to human male and female reproductive systems, respectively?

(A) Vasa efferentia --- fallopian tubes
(B) Scrotum --- labia majora
(C) Penis --- Clitoris
(D) Bulbourethral glands --- Vestibular glands

26. Identify the correct sequence of events of pollen pistil interaction given below.
i. syngamy
ii. pollination
iii. siphonogamy
iv. triple fusion
v. porogamy
Choose the correct option.

(A) ii → iii → i → v → iv
(B) ii → i → iii → v → iv
(C) ii → iii → v → i → iv
(D) ii → v → iii → i → iv

27. The first transgenic plant produced was _____.

(A) Bt cotton
(B) Bt brinjal
(C) Tomato
(D) Tobacco

28. Given below are two statements.
Statement I: Stratification is the horizontal distribution of different plants and animals on land
Statement II: Forest is a good example of stratification.
In the light of the above statements, choose the correct answer from the options given below.

(A) Both statement I and statement II are correct.
(B) Both statement I and statement II are incorrect.
(C) Statement I is correct but statement II is incorrect.
(D) Statement I is incorrect but statement II is correct.

29. Select the correct match regarding formed elements of blood.

(A) Polycythemia ---- ratio of RBCs to total blood volume
(B) Hematocrit --- moving of WBCs out of the capillary walls
(C) Phagocytosis --- destruction of antigen-antibody complexes, bacteria etc
(D) Leukemia ---- increase in number of RBCs

30. Which of the following cranial nerves does NOT contain parasympathetic nerve fibres?

(A) Facial
(B) Trigeminal
(C) Glossopharyngeal
(D) Vagus

31. Edges of large lake or a beach is a perfect example of _____

(A) stratification
(B) zonation
(C) xeric succession
(D) grassland

32. Given below are two statements.
Statement I: Habitat consists of numerous niches.
Statement II: Niche is an area where species lives and prospers.
In light of above statements choose the correct option.

(A) Both statement I and statement II are correct.
(B) Both statement I and statement II are incorrect.
(C) Statement I is correct but statement II is incorrect.
(D) Statement I is incorrect but statement II is correct.

33. Which of the following nucleic acids carries activated amino acid up to the site of protein synthesis?

(A) DNA
(B) mRNA
(C) r RNA
(D) t RNA

34. The result of which cross illustrates Mendel's law of segregation?

(A) Tt × tt
(B) Rr × RR
(C) Rr × Rr
(D) tt × tt

35. When two pink flowered snapdragon plants are crossed, what will be the phenotypic ratio in F2 plants?

(A) 1 : 1
(B) 3 : 1
(C) 1 : 2 : 1
(D) 3 : 2 : 1

36. Which of the following are found in the portal area of liver?
i. Branch of hepatic portal vein
ii. Branch of hepatic vein
iii. Branch of bile duct
iv. Branch of hepatic artery
Select the correct option -

(A) i and iii only
(B) ii and iii only
(C) i, iii and iv only
(D) i, ii and iv only

37. The lowermost cell of the suspensor towards the embryo is known as _____.

(A) haustoria
(B) hypophysis
(C) epicotyl
(D) hypocotyl

38. Match the following conditions associated with mental disorders in column I with their respective meanings in column II and choose the correct option.
Column I | Column II
i. Bullimia | a. loss of memory
ii. Anorexia nervosa | b. extreme overindulgence in food
iii. Amnesia | c. sadness and inactivity in life
iv. Depression | d. emotional aversion to food

(A) i - b, ii - d, iii - a, iv - c
(B) i - d, ii - a, iii - b, iv - c
(C) i - a, ii - c, iii - d, iv - b
(D) i - c, ii - a, iii - b, iv - d

39. Which one of the following is correct regarding special features of Neanderthal man?
i. He used hide to cover his body.
ii. It's fossil was first found in Germany.
iii. He had semi erect posture.
iv. He existed during Miocene epoch.
v. He constructed flint tools.

(A) i and ii only
(B) i, ii, iii and iv only
(C) i, ii and v only
(D) ii, iii, iv and v only

40. The cells, which release secretion to stimulate adjacent cells in the organism, are known as _____.

(A) paracrines
(B) autocrines
(C) endocrines
(D) pheromones

41. Given below are two statements.
Statement I: Tobacco, Marijuana and other drugs may cause infertility in both men and women.
Statement II: Nicotine blocks the production of sperms and decreases the size of testicles.
In the light of above statements, choose the correct answer from options given below.

(A) Both statement I and statement II are correct.
(B) Both statement I and statement II are incorrect.
(C) Statement I is correct but statement II is incorrect.
(D) Statement I is incorrect but statement II is correct.

42. In glycolysis, the two ATP molecules are consumed during _____

(A) Step 1 and 2
(B) Step 1 and 4
(C) Step 1 and 3
(D) Step 1 and 5

43. Nearly 70% of natural nitrogen fixation is carried out by _____.

(A) physical process
(B) Prokaryotes
(C) eukaryotes
(D) Haber - Bosh process

44. Match the following with respect to different categories of red list. Choose the correct option.
Column I | Column II
i. Extinct | a. species whose members survive only in captivity.
ii. Extinct in wild | b. Rapid population decline of 50% to more than 70% over the previous 10 years.
iii. Endangered | c. species in which the last individual has died.
iv. Vulnerable | d. Rapid population decline of 30% to more than 50% over the previous 10 years.

(A) i - d, ii - b, iii - c, iv - a
(B) i - c, ii - a, iii - b, iv - d
(C) i - c, ii - d, iii - b, iv - a
(D) i - b, ii - c, iii - a, iv - d

45. The electron carriers and enzymes of electron transport chain are arranged on inner mitochondrial membrane to form how many complexes?

(A) Six
(B) Five
(C) Four
(D) Three

46. Bryophytes like mosses are able to grow in small amount of soil occupies the _____ seral stage in the xerarch succession.

(A) pioneer
(B) second
(C) third
(D) fourth

47. Match the following diseases in column I with their respective modes of treatment in column II and select the correct option.
Column I | Column II
i. Malaria | a. drugs like nystatin, fluconazole, intraconazole.
ii. Dermatophytosis | b. drugs like metronidazole and Tinidazole.
iii. Amoebiasis | c. combination of artesunate, sulfadoxine, pyrimethamine etc
iv. Filariasis | d. diethyl - carbamazine citrate tablets.

(A) i - d, ii - c, iii - a, iv - b
(B) i - c, ii - a, iii - b, iv - d
(C) i - b, ii - d, iii - c, iv - a
(D) i - a, ii - b, iii - d, iv - c

48. Breakdown of alveoli and shortness of breath is observed in _____.

(A) emphysema
(B) laryngitis
(C) pneumonia
(D) asthma

49. Tubular secretion is the only mode of excretion in _____.

(A) cartilagenous fishes
(B) marine bony fishes
(C) fresh water bony fishes
(D) marine birds

50. Which hormone is NOT secreted by placenta?

(A) hCG
(B) Inhibin
(C) Estrogen
(D) Progesterone

51. Select the correct match of scientists and their respective discoveries.

(A) Karl Landsteiner in 1900 - A, B, O blood groups.
(B) Decastello and Sturli in 1902 - Concept of immunity
(C) Edward Jenner - Rh factor (Antigen 'D')
(D) Landsteiner and Wiener in 1940 - 'AB' blood group system.

52. Maturation of both androecium and gynoecium in a homogamous flower helps in _____.

(A) cross pollination
(B) self pollination
(C) apomixis
(D) polyembryony

53. In tissue culture technique morphogenic differentiation of shoot and root is controlled by the interaction and ratio of _____.

(A) auxin and gibberellins
(B) gibberellins and cytokinin
(C) auxin and cytokinin
(D) ethylene and ABA

54. The unit of measurement of water potential is _____.

(A) Bars only
(B) Bars or atmospheres only
(C) Bars or atmospheres or Pascals only
(D) Bars or atmospheres or Pascals or Joules only

55. Which of the following organisms can respire anaerobically as well as aerobically?

(A) Fishes
(B) Yeasts
(C) Lichens
(D) Algae

56. Given below are two statements:
Statement I: Minerals are absorbed by plants with or without expenditure of energy.
Statement II: Mineral ion absorption is independent of water absorption.
In the light of the above statements, choose the most appropriate answer from the options given below.

(A) Both statement I and statement II are true.
(B) Both statement I and statement II are false.
(C) Statement I is true but statement II is false.
(D) Statement I is false but statement II is true.

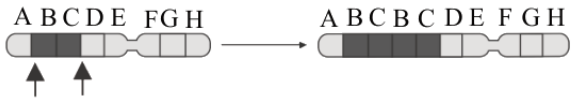
57. Proteins like Keratin of hair consists of polypeptide chain arranged _____.

(A) like a pleated sheet
(B) like a spiral helix
(C) in linear sequence
(D) in twisted and folded sequence

58. In human females, the pair of hormones produced ONLY during pregnancy is _____.

(A) ACTH, ADH
(B) hCG, HPL
(C) hCG, MSH
(D) GH, HPL

59. Observe the following diagram and select the correct chromosomal aberration from the list given below.



(A) Deletion
(B) Duplication
(C) Inversion
(D) Translocation

60. The gene for the production of an iron storage protein, ferritin is isolated from A and transferred to B.
Column A | Column B

(A) A: soybean | B: rice
(B) A: soybean | B: potato
(C) A: alfalfa | B: banana
(D) A: tomato | B: tobacco

61. Which one of the following is NOT a Intra-Uterine Device?

(A) Lippes loop
(B) Progestasert
(C) Nexplanon
(D) Cu-T and Cu-7

62. The concept of central dogma in retroviruses is given by _____.

(A) Temin and Baltimore
(B) Meselson and Stahl
(C) Watson and Crick
(D) MacCarty and MacLeod

63. Which of the following statement/s is/are correct with respect to generation and conduction of nerve impulse?
i. The resting potential difference is -70mvs
ii. The voltage gated Na+ and K+ channels operate together and are self closing.
iii. At the peak of action potential, the potential difference rises to +30 to +60mvs
iv. In medullated nerve fibre, the action potential is conducted as wave of membrane depolarization.
v. The resting potential is maintained by especially closure of gated channels of Na+ and K+

(A) i only
(B) iii and iv only
(C) ii, iv and v only
(D) i, iii and v only

64. Generally vernalization is effective at _____ stage in annual plants.

(A) floral bud
(B) flower
(C) fruit
(D) seedling

65. Which one of the following pairs are fresh water carps?

(A) *Cirrhina mrigala* and Grass carp
(B) *Harpadon* and *Stromateus*
(C) *Sardinella* and common carp
(D) *Rastrelliger* and silver carp

66. Pyramid of energy is always upright as energy is _____ at each trophic level.

(A) gained
(B) lost
(C) produced
(D) constant

67. Given below are two statements
Statement I: Stenohaline animals tolerate wide range of salt concentration.
Satement II : Euryhaline animals are capable of handling narrow range of salt concentration.
In the light of above statements, choose the most appropriate answer from the options given below -

(A) Both statement I and statement II are correct.
(B) Both statement I and statement II are incorrect.
(C) Statement I is correct but statement II is incorrect.
(D) Statement I is incorrect but statement II is correct.

68. The part of the plant used in tissue culture is _____.

(A) callus
(B) explant
(C) inoculum
(D) embryo

69. Human growth hormone is obtained from transgenic tobacco plant by introducing the gene in the _____.

(A) mitochondria
(B) chloroplast
(C) nucleus
(D) nucleolus

70. Caecum is a small blind sac present at the junction of _____.

(A) ileum and colon
(B) duodenum and jejunum
(C) jejunum and ileum
(D) colon and rectum

71. A colourblind man marries a woman with normal vision, what is the probability of their son being colourblind?

(A) 0%
(B) 0.5%
(C) 0.75%
(D) 1%

72. The secondary developing follicles of ovary secrete hormone _____.

(A) relaxin
(B) inhibin
(C) estrogen
(D) secretin

73. Given below are the two statements
Statement I: Earth's surface re-emits the heat in the form of infrared radiations.
Statement II: Atmospheric gases like CO2 and CH4 prevent the escaping of infrared radiations to space causing reheating of earth.
In the light of above statements, choose the correct answer from the options given below.

(A) Both statement I and statement II are correct.
(B) Both statement I and statement II are incorrect.
(C) Statement I is correct but statement II is incorrect.
(D) Statement I is incorrect but statement II is correct.

74. 'Wobble-hypothesis' explains which one of the following properties of genetic code?

(A) Universal
(B) Non-ambiguous
(C) Commaless
(D) Degeneracy

75. How many pollen mother cells are involved in formation of 8 pollen tetrads?

(A) 4
(B) 8
(C) 16
(D) 32

76. Select the correct statements regarding external structure of human heart.
i. Pulmonary trunk arising from right ventricle is present on anterior surface.
ii. Aorta arising from left ventricle is present on posterior surface.
iii. Externally the atria are separated from ventricles by coronary sulcus.
iv. Ligamentum arteriosum is the remnant of ductus arteriosus.
v. Pulmonary veins open into left atrium along the anterior surface.

(A) i, iii, and iv
(B) ii, iii, and iv
(C) iii, iv and v
(D) i, ii and iii

77. Secondary roots develop from _____.

(A) cortex
(B) epidermis
(C) endodermis
(D) pericycle

78. The scotopic vision is developed through the stimulation of _____.

(A) cone cells only
(B) rod cells only
(C) cone and rod cells only
(D) cone and pigment cells only

79. Lymph contains _____.

(A) WBCs and intercellular fluid
(B) RBCs and platelets
(C) RBCs and WBCs
(D) Proteins and RBCs

80. Capacitation process of sperms involves following changes EXCEPT _____.

(A) Acrosome membrane becomes thin
(B) Fertilizin - antifertilizin interaction takes place
(C) Calcium ions enter the sperms
(D) Sperm tails begin to show rapid whiplash movements

81. Which hormone secreted by pituitary gland is under predominant inhibitory control from hypothalamus?

(A) MSH
(B) Prolactin
(C) Oxytocin
(D) Gonadotropin

82. The tiger census in our national parks is often based on _____.

(A) the actual count of individuals
(B) the number on the collar around their neck
(C) pugmarks and faecal pellets
(D) the actual photographs

83. Arrange and select the following events in correct sequence during measurement of Blood pressure by sphygmomanometer.
i. Pulsatile sound disappears.
ii. Cuff is inflated to block brachial artery by external pressure.
iii. First pulsatile sound is heard indicating systolic pressure.
iv. Pressure in the cuff is slowly lowered.
v. Cuff is wrapped tightly around upper arm.

(A) v → ii → ii → iii → i
(B) iv → ii → i → iii → v
(C) iii → v → i → ii → iv
(D) i → v → ii → iii → iv

84. Given below are the two statements.
Statement-I: Only one strand in the transcription unit functions as template and is called antisense strand.
Statement-II: The coding strand of transcription unit is called sense strand.
In the light of above statements choose the correct answer from the options given below.

(A) Both statement-I and statement-II are true.
(B) Both statement-I and statement-II are false.
(C) Statement-I is true but statement-II is false.
(D) Statement-I is false but statement-II is true.

85. Who among the following has coined the term 'chemiosmosis' for the transfer of protons accompanied with synthesis of ATP?

(A) Blackman
(B) Hatch and Slack
(C) Peter Mitchell
(D) Calvin and Benson

86. Following are Indian buffalo breeds EXCEPT, _____.

(A) Mehsana and Jaffarabadi
(B) Murrah and Nagpuri
(C) Gir and Sindhi
(D) Surati and Nili

87. Cuticular transpiration occurs by _____.

(A) imbibition
(B) diffusion
(C) endo-osmosis
(D) exo-osmosis

88. Which of the following is the site for Krebs cycle during aerobic respiration?

(A) Cytoplasm
(B) Outer membrane of mitochondria
(C) Inner membrane of mitochondria
(D) Matrix of mitochondria

89. Nature's carrying capacity (K) for a species means _____.

(A) the total number of individuals in a population
(B) beyond which no further growth is possible in that habitat
(C) the amount of resources available for its growth
(D) the minimum population density in that habitat

90. In the alimentary canal of man, HCl provides acidic pH (pH 1.8) for action of _____.

(A) trypsin
(B) pepsin
(C) chymotrypsin
(D) enterokinase

91. The sequence of nitrogen bases of one strand of DNA determines the sequence of bases of other strand. This is because _____.

(A) there is specific pairing between adenine with guanine and cytosine with thymine
(B) purines and pyrimidines are linked by Hydrogen bonds
(C) DNA molecule forms a helical structure
(D) the two strands of DNA are complementary

92. If cell 'A' is having osmotic pressure=10 bars, turgor pressure=5 bars and cell 'B' is having osmotic pressure=30 bars and turgor pressure=10 bars then, the flow of water occurs _____.

(A) from cell 'A' to cell 'B'
(B) from cell 'B' to cell 'A'
(C) from both cell 'A' to cell 'B' to cell 'A'
(D) in neither direction

93. Match the human diseases/health condition given in column I with the recombinant proteins used in their treatmet given in column II and choose the correct option.
Column I | Column II
i. Parturition | a. Erythropoietin
ii. Cancer | b. α-1 Antitrypsin
iii. Anaemia | c. Interferons
iv. Emphysema | d. Relaxin

(A) i - a, ii - b, iii - c, iv - d
(B) i - d, ii - c, iii - a, iv - b
(C) i - b, ii - a, iii - d, iv - c
(D) i - d, ii - a, iii - b, iv - c

94. Match column I with column II
Column I | Column II
i. Glucose | a. reserve food in plants
ii. Fructose | b. component of cell wall
iii. Cellulose | c. fuel of living cell
iv. Starch | d. fruit sugar

(A) i - d, ii - c, iii - b, iv - a
(B) i - c, ii - d, iii - b, iv - a
(C) i - c, ii - a, iii - d, iv - b
(D) i - c, ii - d, iii - a, iv - b

95. Which one of the following reactions occur during process of solubilization in Biogas production?

(A) Carbohydrates and proteins are converted into simple sugars and amino acids respectively.

(B) Acetic acid or formic acid is converted into methane, CO2 and H2O.

(C) Simple organic material is converted into formic acid or acetic acid.

(D) Simple sugars and amino acids are converted into carbohydrates and proteins.

96. Outbreeding devices are developed in angiosperms to avoid _____.

(A) autogamy

(B) allogamy

(C) fertilization

(D) seed formation

97. Which structure acts as a transducer, converting sound vibrations into nerve impulses?

(A) Organ of Corti

(B) Cochlea

(C) Crista

(D) Saccule

98. The genotype of vestigial wings in *Drosophila* is _____

(A) vg^{st}

(B) vg

(C) vg^{no}

(D) vg^{ni}

99. Match the type of population interaction in column I with their signs given in column II.
Column I | Column II (Species A | Species B)
i. Mutualism | a. + | -
ii. Commensalism | b. - | 0
iii. Parasitism | c. + | +
iv. Amensalism | d. + | 0
(+) beneficial; (-) harmful; (0) not affected
Choose the correct option.

(A) i - c, ii - d, iii - a, iv - b

(B) i - d, ii - c, iii - b, iv - a

(C) i - a, ii - b, iii - c, iv - d

(D) i - a, ii - d, iii - b, iv - c

100. During translation in protein synthesis, binding of codon and anticodon occurs by _____ bond.

(A) peptide

(B) phosphodiester

(C) hydrogen

(D) glycosidic

- End of Question Paper -