MHT CET 2025 11 April Shift 2 PCB Question Paper

General Instructions

Read the following instructions very carefully and strictly follow them:

1. This question booklet contains 150 Multiple Choice Questions (MCQs).
2. Section-A: Physics & Chemistry - 50 Questions each and Section-B: Biology - 50 Questions.
3. Choice and sequence for attempting questions will be as per the convenience of the candidate.
4. Read each question carefully.
5. Determine the one correct answer out of the four available options given for each question.
6. Physics and Chemistry have 1 mark for each question, and Bio have 2 marks for every question. There shall be no negative marking.
7. No mark shall be granted for marking two or more answers of the same question, scratching, or overwriting.
8. Duration of the paper is 3 Hours.

1. A solution is formed by mixing chloroform ($CHCl_3$) and acetone (CH_3COCH_3). Which of the following is true regarding the nature of this solution?

(A) It shows positive deviation from Raoult's law due to weak intermolecular forces.

(B) It shows negative deviation due to strong dipole-dipole interactions.

(C) It obeys Raoult's law over the entire range of composition.

(D) It forms an ideal solution with no enthalpy change.

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2. An aqueous solution of $CuSO_4$ is electrolyzed using platinum electrodes. Which of the following will be observed at the cathode?

(A) Copper metal is deposited.

(B) Hydrogen gas is evolved.

(C) Oxygen gas is evolved.

(D) Copper dissolves.

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3. In the electrolysis of molten NaCl using inert electrodes, what will be observed at the electrodes?

(A) Sodium deposited at anode, chlorine at cathode.

(B) Sodium deposited at cathode, chlorine at anode.

(C) Hydrogen gas at cathode, chlorine at anode.

(D) Sodium deposited at anode, oxygen at cathode.

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4. Which of the following pair of cells are haploid?

(A) Nucleus and antipodals.

(B) Polar nuclei and Nucleus.

(C) Egg cell and antipodals.

(D) Etc.

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5. Defective foetus can be checked by which process?

(A) Amniocentesis.

(B) Ultrasound.

(C) Blood test.

(D) Genetic screening.

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6. Water that except ____ and not is absorbed by plant.

(A) transpired.

(B) evaporated.

(C) absorbed.

(D) diffused.

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7. Which of the following is not a function of sperm?

(A) Fertilization of egg.

(B) Carrying genetic material to the egg.

(C) Providing nourishment to the egg.

(D) Motility for reaching the egg.

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8. How there is a connection between corona radiata and zona pellucida?

(A) Both are involved in the fertilization process.

(B) They are both involved in the formation of the blastocyst.

(C) They both provide nourishment to the egg.

(D) They are both layers of the ovum, but have different functions.

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9. Which metal ion is required during PCR?

(A) Magnesium (Mg^{2+})

(B) Calcium (Ca^{2+})

(C) Potassium (K^{+})

(D) Sodium (Na^{+})

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10. What is the genotype of Drosophila showing normal wings?

(A) vg+

(B) vg no

(C) vg

(D) vg ni

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11. Who proved transforming principle?

(A) Griffith.

(B) Avery.

(C) Watson.

(D) Franklin.

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12. Enzymes are basically formed by?

(A) Proteins.

(B) Carbohydrates.

(C) Lipids.

(D) Nucleic acids.

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13. Which of the following pyramid is inverted?

(A) Energy pyramid.

(B) Biomass pyramid.

(C) Pyramid of numbers.

(D) None of the above.

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14. How many cells are there in the embryo sac?

(A) 6.

(B) 7.

(C) 8.

(D) 5.

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15. Which of the following shows recessive traits?

(A) Inflated pod shape.

(B) Purple flower.

(C) Axile placentation.

(D) Length of stem.

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