MHT CET 2026 May 10 Shift 2

Question Paper (Memory Based)

Conducted by CET Cell, Maharashtra

General Instructions

(i) **Duration:** The total duration of the examination is 3 hours (180 minutes).

(ii) **Total Marks:** The complete paper carries a maximum of 200 marks.

(iii) **Structure:** The paper has 3 Sections:

- **Section A:** 50 Multiple Choice Questions (Physics)
- **Section B:** 50 Multiple Choice Questions (Chemistry)
- **Section C:** 100 Multiple Choice Questions (Biology)

(iv) **Compulsory Questions:** All 200 questions are compulsory.

(v) Each question has four options. Only **one** option is correct.

(vi) **Right Answer:** Physics (+1 marks), Chemistry (+1 marks) and Biology(+1 marks).

(vii) **Incorrect Answer:** (No Negative marking).

(viii) **Unanswered/Marked for Review:** 0 marks.

1. The pioneer species in a lithosere (succession on bare rock) are:

(A) Phytoplanktons

(B) Lichens

(C) Mosses

(D) Herbs

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2. Detritivores like earthworms perform:

(A) Fragmentation

(B) Leaching

(C) Catabolism

(D) Humification

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3. Multiple-statement question: Which of the following are TRUE about ecological pyramids? 1. The pyramid of energy is always upright. 2. The pyramid of biomass in the sea is generally inverted. 3. The pyramid of numbers in a grassland is upright. 4. Saprophytes occupy the top of every pyramid.

(A) 1, 2, and 3

(B) 1, 2, and 4

(C) 2 and 4

(D) All are correct

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4. Statement I: Net Primary Productivity (NPP) is GPP minus respiration losses (R). Statement II: The energy flow in an ecosystem is bidirectional.

(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.

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5. Match the following interactions Column I (Interaction) Column II (Effect) i. Mutualism a. (+, 0) ii. Commensalism b. (+, +) iii. Amensalism c. (-, -) iv. Competition d. (-, 0)

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

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

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

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

8. Statement I: Allen's Rule states that mammals from colder climates have shorter ears and limbs. Statement II: Opuntia has leaves modified into spines to reduce transpiration.

(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.

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9. Match the disease with its causal organism: Column I Column II i. Amoebiasis a. Wuchereria bancrofti ii. Filariasis b. Entamoeba histolytica iii. Syphilis c. HIV iv. AIDS d. Treponema pallidum

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

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

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

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

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10. The infective stage of Plasmodium for humans is:

(A) Merozoite

(B) Trophozoite

(C) Sporozoite

(D) Gametocyte

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11. Match the following receptors with their stimuli: Column I (Receptor) Column II (Stimuli) i. Photoreceptors a. Taste ii. Gustatoreceptors b. Light iii. Phonoreceptors c. Pain iv. Nociceptors d. Sound

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

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

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

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

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12. Chlorobenzene reacts with Mg in dry ether to give a compound (A) which further reacts with ethanol to yield

(A) Phenol

(B) Benzene

(C) Ethylbenzene

(D) Phenyl ether

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13. The value of the 'spin only' magnetic moment for one of the following configurations is 2.84 BM. The correct one is

(A) d (in strong ligand field)

(B) d^3 (in weak as well as in strong fields)

(C) d (in weak ligand fields)

(D) d (in strong ligand fields)

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14. Which of the following represents the correct order of the acidity in the given compounds?

(A) FCHCOOH > CHCOOH > BrCHCOOH > ClCHCOOH

(B) BrCHCOOH > ClCHCOOH > FCHCOOH > CHCOOH

(C) FCHCOOH > ClCHCOOH > BrCHCOOH > CHCOOH

(D) CHCOOH > BrCHCOOH > ClCHCOOH > FCHCOOH

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15. Ethyl alcohol can be prepared from Grignard reagent by the reaction of:

(A) HCHO

(B) RCO

(C) RCN

(D) RCOCl

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16. Which of the following is most acidic?

(A) Benzyl alcohol

(B) Cyclohexanol

(C) Phenol

(D) m-chlorophenol

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17. Identify monodentate ligand from the following.

(A) Cyanide ion

(B) Ethylenediamine

(C) Oxalate ion

(D) Ethylendiaminetetraacetate

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18. Identify linear polymer from the following.

(A) High density polythene

(B) Low density polythene

(C) Bakelite

(D) Melamine

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19. What is the conductivity of 0.05 M $BaCl_2$ solution if its molar conductivity is 220 Ω^{-1} cm^2 mol^{-1}?

(A) 0.011 Ω^{-1} cm^{-1}

(B) 0.022 Ω^{-1} cm^{-1}

(C) 0.033 Ω^{-1} cm^{-1}

(D) $0.044\ \Omega^{-1}\ \text{cm}^{-1}$

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20. Which from following polymers is grouped in the category of elastomers?

(A) Nylon 6,6

(B) Buna-S

(C) Terylene

(D) Polythene

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26. An electron revolves in a circular orbit of radius r with frequency f. Its equivalent magnetic dipole moment is:

(A) $\pi e f r^2$

(B) $\frac{1}{2} e f r^2$

(C) $2\pi e f r^2$

(D) $e f r^2$

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27. A long straight wire carries a current I. A proton travels with velocity v parallel to the wire at a distance d from it, in the same direction as the current. The magnetic force acting on the proton is:

(A) Attractive, magnitude $\frac{\mu_0 e I v}{2\pi d}$

(B) Repulsive, magnitude $\frac{\mu_0 e I v}{2\pi d}$

(C) Attractive, magnitude $\frac{\mu_0 e I v}{4\pi d}$

(D) Zero

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28. An infinite line charge of uniform linear charge density λ is placed along the z-axis. The work done in moving a charge q from $(a, 0, 0)$ to $(2a, 0, 0)$ is:

(A) $\frac{q\lambda}{2\pi\varepsilon_0}\ln 2$
(B) $\frac{q\lambda}{4\pi\varepsilon_0}\ln 2$
(C) $\frac{q\lambda}{2\pi\varepsilon_0}\ln\left(\frac{1}{2}\right)$
(D) Zero

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29. A parallel plate capacitor has a capacitance C. If a dielectric slab of dielectric constant K and thickness equal to half the plate separation is introduced parallel to the plates, the new capacitance is:

(A) $\frac{2K}{K+1}C$
(B) $\frac{K+1}{2}C$
(C) KC
(D) $\frac{K}{2}C$
