

# MHT CET 2026 April 21 Shift 1

## 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. Filarial disease (filariasis) is transmitted by which of the following mosquitoes?

- (A) Anopheles
- (B) Aedes
- (C) Culex
- (D) Mansonia

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2. Match the following diseases with their causative agents:

Column A (Disease)	Column B (Causative agent)
1. Common cold	A. Bacteria
2. Typhoid	B. Virus
3. Malaria	C. Protozoa

- (A) 1 – B, 2 – A, 3 – C  
(B) 1 – A, 2 – B, 3 – C  
(C) 1 – C, 2 – A, 3 – B  
(D) 1 – B, 2 – C, 3 – A
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**3. The normal value of Tidal Volume (TV) in a healthy adult is approximately:**

- (A) 500 mL  
(B) 2500 – 3000 mL  
(C) 1100 – 1200 mL  
(D) 4500 – 5000 mL
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**4. Which of the following respiratory volumes represents the air remaining in the lungs after forced expiration?**

- (A) Tidal Volume (TV)  
(B) Inspiratory Reserve Volume (IRV)  
(C) Residual Volume (RV)  
(D) Vital Capacity (VC)
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**5. Where is sperm produced?**

- (A) Vas deferens  
(B) Epididymis  
(C) Seminiferous tubules  
(D) Prostate gland
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**6. If the stroke volume of the heart is 70 mL/beat and the cardiac output is 5250 mL/min, what is the heart rate?**

- (A) 60 beats/min  
(B) 70 beats/min
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- (C) 75 beats/min
  - (D) 80 beats/min
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**7. Extrusion of the second polar body from the egg nucleus occurs:**

- (A) After entry of sperm but before fertilization
  - (B) After completion of fertilization
  - (C) Before entry of sperm into the ovum
  - (D) Simultaneously with first cleavage
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**8. Which of the following population interactions is widely used in medical science for the production of antibiotics?**

- (A) Commensalism
  - (B) Mutualism
  - (C) Parasitism
  - (D) Amensalism
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**9. *Wuchereria bancrofti* is transmitted to the human body by:**

- (A) Housefly
  - (B) Anopheles
  - (C) Culex
  - (D) Aedes
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**10. What is the phenotypic ratio of a dihybrid cross in the  $F_2$  generation?**

- (A) 3 : 1
  - (B) 1 : 2 : 1
  - (C) 9 : 3 : 3 : 1
  - (D) 1 : 1 : 1 : 1
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**11. Identify the "molecular scissors" used to cut DNA at specific sequences.**

- (A) DNA Ligase
  - (B) DNA Polymerase
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- (C) Restriction Enzymes
  - (D) RNA Polymerase
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**12. Which hormone is responsible for apical dominance in plants?**

- (A) Gibberellin
  - (B) Cytokinin
  - (C) Auxin
  - (D) Ethylene
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**13. Which antibody is most abundant in human colostrum (initial breast milk)?**

- (A) IgG
  - (B) IgM
  - (C) IgA
  - (D) IgE
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**14. In an ecosystem, which ecological pyramid is always upright and never inverted?**

- (A) Pyramid of Biomass
  - (B) Pyramid of Numbers
  - (C) Pyramid of Energy
  - (D) Pyramid of Producers
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**15. What is the ratio of escape velocity to orbital velocity?**

- (A) 1 : 1
  - (B) 2 : 1
  - (C)  $\sqrt{2} : 1$
  - (D)  $1 : \sqrt{2}$
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**16. Find the moment of inertia of a solid sphere about its diameter.**

- (A)  $\frac{2}{3}MR^2$
  - (B)  $\frac{2}{5}MR^2$
  - (C)  $\frac{1}{2}MR^2$
  - (D)  $\frac{3}{5}MR^2$
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**17. If the distance between two charges is doubled, the Coulomb force becomes:**

- (A) Twice
  - (B) Half
  - (C) One-fourth
  - (D) Four times
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**18. What is the de Broglie wavelength of a particle at rest?**

- (A) Zero
  - (B) Infinite
  - (C) One
  - (D) Undefined
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**19. The working of an optical fiber is based on which phenomenon?**

- (A) Refraction
  - (B) Diffraction
  - (C) Total Internal Reflection
  - (D) Interference
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**20. What is the hybridization of carbon in an Ethyne ( $C_2H_2$ ) molecule?**

- (A)  $sp^3$
  - (B)  $sp^2$
  - (C)  $sp$
  - (D)  $sp^3d$
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**21. Name the linkage that holds amino acids together in a protein.**

- (A) Glycosidic bond
  - (B) Ester bond
  - (C) Peptide bond
  - (D) Hydrogen bond
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**22. Which element has the highest electronegativity in the periodic table?**

- (A) Oxygen
  - (B) Chlorine
  - (C) Fluorine
  - (D) Nitrogen
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**23. What is the product when Phenol reacts with neutral Ferric Chloride?**

- (A) Green precipitate
  - (B) Blue complex
  - (C) Violet colored complex
  - (D) Colorless solution
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**24. In a BCC (Body-Centered Cubic) unit cell, what is the coordination number?**

- (A) 4
  - (B) 6
  - (C) 8
  - (D) 12
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