

AP EAPCET 2026 May 19 Shift 1

Question Paper (Memory Based)

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General Instructions

- (i) The test is of 3 hours duration.
- (ii) This test paper consists of 160 questions. The maximum marks are 160.
- (iii) Physics and Chemistry contains 40 questions each and Biology contains 80 questions.
- (iv) Each question carries +1 marks for correct answer and there is no negative marking for wrong answer.

Physics

1. A capacitor has capacitance C . When dielectric of constant 3 completely fills it, new capacitance is:

- (A) $C/3$
- (B) C
- (C) $3C$
- (D) $9C$

2. Work done in moving a charge on an equipotential surface is:

- (A) Maximum
- (B) Minimum
- (C) Zero
- (D) Infinite

3. A wire is stretched to double its length. New resistance becomes:

- (A) $R/2$
 - (B) R
 - (C) $2R$
 - (D) $4R$
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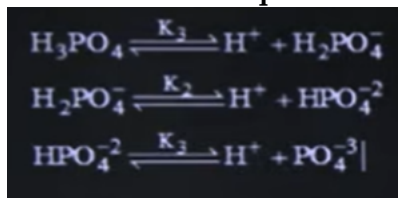
Chemistry

4. For which of the following process entropy change (ΔS) is negative ?

- I) Sublimation of dry ice
- II) Freezing of water
- III) Crystallisation of the dissolved substance
- IV) Burning of rocket fuel

- (A) I, II only
 - (B) II, III only
 - (C) III, IV only
 - (D) I, IV only
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5. Consider the equilibrium reactions:



The equilibrium constant, K_c for the following dissociation $\text{H}_3\text{PO}_4 \rightleftharpoons 3\text{H}^+ + \text{PO}_4^{3-}$ is:

- (A) $\frac{K_1}{K_2K_3}$
 - (B) $K_1K_2K_3$
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- (C) $\frac{K_2}{K_1K_3}$
(D) $K_1 + K_2 + K_3$
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6. The conjugate acid of NH_2^- is:

- (A) NH_3
(B) NH_2OH
(C) NH_4^+
(D) N_2H_4
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Botany

7. In the context of DNA fingerprinting, VNTRs are used as probes. What does VNTR stand for?

- (A) Variable Number of Tandem Repeats
(B) Various Nucleotide Template Regions
(C) Validated Nitrogenous Triple Replicates
(D) Viral Nucleoside Transfer Rates
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8. A Mendelian "Dihybrid Cross" (e.g., $\text{RRYY} \times \text{rryy}$) results in a phenotypic ratio of 9:3:3:1 in the F_2 generation. This ratio supports which law?

- (A) Law of Dominance
(B) Law of Segregation
(C) Law of Independent Assortment
(D) Law of Purity of Gametes
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9. During which stage does the synaptonemal complex dissolve?

- (A) Leptotene
- (B) Pachytene
- (C) Diplotene
- (D) Zygotene

Zoology

10. Birds are Uricotelic, meaning they excrete nitrogenous waste primarily as:

- (A) Urea
- (B) Amino acids
- (C) Ammonia
- (D) Uric acid

11. Differentiate between Red Muscle Fibers (A) and White Muscle Fibers (B) based on the following traits:

- (i) Low mitochondria count
- (ii) High mitochondria count
- (iii) High Myoglobin content
- (iv) Low Myoglobin content
- (v) Aerobic respiration
- (vi) Anaerobic respiration

- (A) A: (i), (iv), (vi) | B: (ii), (iii), (v)
- (B) A: (ii), (iii), (v) | B: (i), (iv), (vi)
- (C) A: (ii), (iv), (v) | B: (i), (iii), (vi)
- (D) A: (i), (iii), (vi) | B: (ii), (iv), (v)

12. The immediate chemical source of energy for muscle contraction is:

- (A) Actin
 - (B) Myosin
 - (C) ATP
 - (D) Creatine Phosphate
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