



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 B:** 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) **Correct Answer:** +1 marks.
- (vii) **Incorrect Answer:** (No Negative marking).
- (viii) **Unanswered/Marked for Review:** 0 marks.

1. How many times does oxidation occur in one Krebs cycle?

- (A) Two times
- (B) Three times
- (C) Four times
- (D) Six times

2. In hydrosere succession, which stage comes just before the sedge meadow stage?

- (A) Phytoplankton stage

- (B) Submerged plant stage
 - (C) Reed swamp stage
 - (D) Woodland stage
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3. Which part of the brain is responsible for maintaining posture and equilibrium?

- (A) Cerebrum
 - (B) Medulla oblongata
 - (C) Cerebellum
 - (D) Hypothalamus
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4. What is the movement of cytoplasm within a cell called?

- (A) Diffusion
 - (B) Osmosis
 - (C) Cytoplasmic streaming (Cyclosis)
 - (D) Active transport
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5. Which enzyme is deficient in patients with Phenylketonuria (PKU)?

- (A) Tyrosinase
 - (B) Phenylalanine hydroxylase
 - (C) Amylase
 - (D) Lactase
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6. What is the SI unit of magnetic induction?

- (A) Weber
 - (B) Tesla
 - (C) Henry
 - (D) Gauss
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7. What is the formula for the safety speed on a banked road?

- (A) $v = \sqrt{rg \sin \theta}$
- (B) $v = \sqrt{\frac{rg}{\tan \theta}}$

(C) $v = \sqrt{rg \tan \theta}$

(D) $v = rg \tan \theta$

8. What is the unit of the L/R ratio?

(A) Ohm

(B) Henry

(C) Seconds

(D) Coulomb

9. What is the relationship between maximum kinetic energy and wavelength in the photoelectric effect?

(A) $K.E. \propto \lambda$

(B) $K.E. \propto \lambda^2$

(C) $K.E. \propto \frac{1}{\lambda}$

(D) $K.E. \propto \sqrt{\lambda}$

10. What is the moment of inertia for two specific (solid) spheres about their common diameter?

(A) $\frac{2}{5}MR^2$

(B) $\frac{7}{5}MR^2$

(C) $\frac{14}{5}MR^2$

(D) $\frac{4}{5}MR^2$
