

CUET PG 2026 Life Science Question Paper

Time Allowed :1 Hour 30 Minutes

Maximum Marks :300

Total Questions :75

General Instructions

Read the following instructions very carefully and strictly follow them:

- The Question Paper consists of 75 Multiple Choice Questions (MCQs).
- Total marks for the exam is 300.
- The total duration is 90 minutes; a timer on the screen will display the remaining time, and the exam will automatically submit when the time reaches zero.
- For every correct answer, 4 marks (+4) will be awarded to the candidate, and a 1 mark (-1) will be deducted for every incorrect answer.
- Question papers are available in both English and Hindi.

1. Which protein is often referred to as the "guardian of the genome" due to its role in cell cycle arrest?

- (A) p21
- (B) p53
- (C) Cyclin D
- (D) Rb protein

2. What is the standard sequence of steps in a PCR (Polymerase Chain Reaction) cycle?

- (A) Annealing → Denaturation → Extension
- (B) Denaturation → Annealing → Extension
- (C) Extension → Denaturation → Annealing
- (D) Annealing → Extension → Denaturation

3. Which nitrogen source is most commonly used by plants for inorganic nitrogen fixation?

- (A) Nitrite (NO_2^-)
- (B) Nitrate (NO_3^-)
- (C) Ammonia (NH_3)
- (D) Molecular nitrogen (N_2)

4. During cellular fractionation, which organelle typically forms part of the pellet when centrifuged at 1000g for 10 minutes?

- (A) Ribosomes
 - (B) Nucleus
 - (C) Endoplasmic Reticulum
 - (D) Lysosomes
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5. In gel electrophoresis of DNA, toward which electrode do the DNA fragments migrate?

- (A) Positive electrode (Anode)
 - (B) Negative electrode (Cathode)
 - (C) Both electrodes equally
 - (D) They do not migrate
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6. What is the primary composition of lipid rafts found in plasma membranes?

- (A) Phospholipids and carbohydrates
 - (B) Cholesterol and sphingolipids
 - (C) Proteins and nucleic acids
 - (D) Glycoproteins and triglycerides
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7. Which immunoglobulin class is primarily involved in mucosal immunity?

- (A) IgG
 - (B) IgA
 - (C) IgM
 - (D) IgE
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8. According to Chargaff's rules, which base relationship is constant across all species?

- (A) $A = C$
 - (B) $A = G$
 - (C) $A = T$
 - (D) $G = T$
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9. What happens to the V_{max} of an enzyme-catalyzed reaction when the substrate concentration is equal to the K_m ?

- (A) ($V = V_{max}$)
 - (B) ($V = V_{max} \frac{2}{2 + \frac{K_m}{V_{max}}} = 2V_{max}$)
 - (D) ($V = 0$)
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10. Which hormone is primarily responsible for the "fight or flight" response in human physiology?

- (A) Cortisol
 - (B) Adrenaline (Epinephrine)
 - (C) Insulin
 - (D) Thyroxine
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11. In the lac operon, which molecule acts as the inducer to initiate transcription?

- (A) Lactose
 - (B) Allolactose
 - (C) Glucose
 - (D) Galactose
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12. Which technique is specifically used to detect the presence of a specific DNA sequence in a sample?

- (A) Western blotting
 - (B) Southern blotting
 - (C) Northern blotting
 - (D) ELISA
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13. What is the role of Topoisomerase during the process of DNA replication?

- (A) Synthesizes RNA primers
 - (B) Unwinds the DNA helix
 - (C) Relieves supercoiling ahead of the replication fork
 - (D) Joins Okazaki fragments
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14. Which amino acid is the universal initiator for protein synthesis in eukaryotes?

- (A) Methionine
- (B) Valine
- (C) Leucine
- (D) Alanine

15. What are the two primary components of a Typhoid Vi vaccine?

- (A) Vi capsular polysaccharide and carrier protein
 - (B) Lipopolysaccharide and toxin
 - (C) Attenuated bacteria and adjuvant
 - (D) DNA plasmid and viral vector
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