



THE VOLUME DEFENCE AND EDUCATION ACADEMY

"Your Success, Our Commitment"

CUET (UG) — BIOLOGY MOCK TEST

Domain Subject: Biology (Code: SCBI11)

Total Questions: 40

Total Marks: 200

Duration: 60 Minutes

Negative Marking: -1

Section A: Cell Biology & Biomolecules

1. Which organelle is responsible for ATP synthesis in eukaryotic cells?
(A) Ribosome
(B) Endoplasmic reticulum
(C) Mitochondria
(D) Golgi apparatus
2. The fluid-mosaic model of the plasma membrane was proposed by:
(A) Robert Hooke
(B) Singer and Nicolson
(C) Watson and Crick
(D) Schleiden and Schwann
3. Which of the following is NOT a function of smooth endoplasmic reticulum (SER)?
(A) Lipid synthesis
(B) Detoxification of drugs
(C) Protein synthesis
(D) Carbohydrate metabolism
4. The enzyme responsible for unwinding DNA during replication is:
(A) DNA polymerase
(B) Ligase
(C) Helicase
(D) Primase
5. The primary structural component of plant cell walls is:
(A) Chitin
(B) Cellulose
(C) Glycogen
(D) Starch
6. Chargaff's rules state that in DNA:
(A) $A = G$ and $C = T$
(B) $A + G = C + T$
(C) $A = C$ and $G = T$
(D) $A + C = G + T$



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7. Which RNA carries amino acids to ribosomes?
(A) mRNA
(B) rRNA
(C) tRNA
(D) snRNA
8. The Krebs cycle occurs in the:
(A) Cytoplasm
(B) Mitochondrial matrix
(C) Inner mitochondrial membrane
(D) Chloroplast stroma

Section B: Genetics & Evolution

9. A dihybrid cross ($AaBb \times AaBb$) gives phenotypic ratio:
(A) 1:2:1
(B) 3:1
(C) 9:3:3:1
(D) 1:1:1:1
10. Sickle cell anemia is caused by mutation in:
(A) Alpha-globin
(B) Beta-globin
(C) Haemoglobin F
(D) Myoglobin
11. Central Dogma sequence:
(A) RNA $\rightarrow$ DNA $\rightarrow$ Protein
(B) DNA $\rightarrow$ RNA $\rightarrow$ Protein
(C) Protein $\rightarrow$ RNA $\rightarrow$ DNA
(D) DNA $\rightarrow$ Protein $\rightarrow$ RNA
12. Hardy-Weinberg equilibrium holds when:
(A) Mutation occurs
(B) Natural selection acts
(C) No evolutionary forces act
(D) Gene flow occurs
13. Natural Selection was proposed by:
(A) Gregor Mendel
(B) Hugo de Vries
(C) Charles Darwin
(D) Lamarck
14. Turner's syndrome is caused by:
(A) 47, XXY
(B) 45, X
(C) 47, XYY
(D) 47, XXX



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15. Restriction enzymes cut DNA at:

- (A) Codons
- (B) Palindromic sequences
- (C) Telomeres
- (D) Introns

16. PCR was invented by:

- (A) Frederick Sanger
- (B) Kary Mullis
- (C) Herbert Boyer
- (D) Paul Berg

Section C: Plant & Animal Physiology

17. Loss of water vapour through stomata:

- (A) Transpiration
- (B) Respiration
- (C) Guttation
- (D) Plasmolysis

18. Hormone promoting fruit ripening:

- (A) Auxin
- (B) Cytokinin
- (C) Ethylene
- (D) Gibberellin

19. Site of photosynthesis:

- (A) Mitochondria
- (B) Chloroplast
- (C) Vacuole
- (D) Nucleus

20. ABO blood group is controlled by:

- (A) Two alleles
- (B) Three alleles
- (C) Four alleles
- (D) Multiple genes

21. Transport of water/minerals in plants:

- (A) Phloem
- (B) Xylem
- (C) Collenchyma
- (D) Parenchyma

22. "Fight or flight" hormone:

- (A) Insulin
- (B) Thyroxine



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- (C) Adrenaline
- (D) Glucagon

23. Functional unit of kidney:

- (A) Alveolus
- (B) Neuron
- (C) Nephron
- (D) Villus

24. Fertilisation in humans occurs in:

- (A) Uterus
- (B) Ovary
- (C) Fallopian tube
- (D) Cervix

Section D: Ecology & Environment

25. One benefits, other unaffected:

- (A) Mutualism
- (B) Commensalism
- (C) Parasitism
- (D) Competition

26. Main greenhouse gas:

- (A) Nitrogen
- (B) Oxygen
- (C) Carbon dioxide
- (D) Argon

27. Energy pyramid is always:

- (A) Inverted
- (B) Spindle-shaped
- (C) Upright
- (D) Variable

28. Biodiversity hotspots:

- (A) Low diversity
- (B) High endemism + threat
- (C) Fully protected
- (D) No humans

29. Ozone depletion caused by:

- (A) CO₂
- (B) Methane
- (C) CFCs
- (D) N₂O

30. Ecological succession:

- (A) Random change
- (B) Directional change



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- (C) Sudden extinction
- (D) Migration

31. In-situ conservation example:

- (A) Seed bank
- (B) Zoo
- (C) National Park
- (D) Botanical garden

32. Eutrophication caused by excess:

- (A) Fe, Mn
- (B) N, P
- (C) Ca, Mg
- (D) Na, K

Section E: Biotechnology & Human Health

33. First recombinant vaccine:

- (A) Polio
- (B) Hepatitis B
- (C) Smallpox
- (D) Measles

34. Golden Rice contains:

- (A) Vitamin C
- (B) Iron
- (C) Beta-carotene
- (D) Vitamin D

35. AIDS is caused by:

- (A) Herpes virus
- (B) HIV
- (C) Hepatitis C
- (D) Epstein-Barr

36. ELISA detects:

- (A) DNA
- (B) Antigens/antibodies
- (C) Chromosomes
- (D) mRNA

37. Transgenic animal:

- (A) Dolly
- (B) Oncomouse
- (C) Mule
- (D) Liger



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38. Widal test diagnoses:

- (A) Malaria
- (B) Typhoid
- (C) TB
- (D) Dengue

39. Somatic gene therapy:

- (A) Germline change
- (B) Body cell modification
- (C) Cloning
- (D) Embryo modification

40. Penicillin works by:

- (A) Membrane damage
- (B) Inhibiting cell wall synthesis
- (C) Blocking protein synthesis
- (D) Inhibiting DNA replication

