

**AMITY UNIVERSITY DUBAI, UAE**  
**SCHOOL OF ENGINEERING ARCHITECTURE INTERIOR DESIGN**  
**AMITY PLACEMENT TEST | SAMPLE – BIOLOGY**

**Marks: 30**

**Time: 90 min**

**Name: .....**

**Date of Exam: ..... ..**

**Signature of Invigilator:.....**

**Marks Obtained: .....**

**Signature of Evaluator:.....**

**General Instructions for students**

1. Attempt all questions. Each question carries 1 mark.
2. Fill in all required details using ink or a ballpoint pen only.
3. Electronic devices such as mobile phones or electronic diaries are not allowed in the examination room.
4. Strict disciplinary action will be taken against any student found using unfair means.
5. Once the allotted time is over, students must stop writing immediately and hand over their answer booklets to the invigilator.

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Q1. What are the key factors of solid-state reactions?

- (a) Size of the particles
- (b) Mechanical properties of solids
- (c) Thermodynamic and kinetic factors
- (d) Environmental factors

Q2. What is a crystalline's basic repetitive structural unit?

- (a) Monomer
- (b) Molecule
- (c) Unit cell
- (d) Atom

Q3. Which of the following chemicals aids in the regulation of stomach acid production?

- (a) Ranitidine
- (b) Cimetidine
- (c) Histamine
- (d) Omeprazole

Q4. Which of the following cell organelles is called a suicidal bag?

- (a) Lysosomes

- (b) Golgi bodies
- (c) Cell membrane
- (d) Mitochondria

Q5. Which of the following cell organelles is present in plant cells and absent in animal cells?

- (a) Nucleus
- (b) Vacuole
- (c) Chloroplast
- (d) Cytoplasm

Q6. Which of the following statements is true about the Nucleus?

- (a) It is absent in prokaryotes
- (b) It is called the brain of the cell
- (c) It contains DNA and other genetic materials.
- (d) All of the above

Q7. Which of the following cell organelles regulates the entry and exit of molecules to and from the cell?

- (a) Lysosomes
- (b) Golgi bodies
- (c) Cell membrane
- (d) Mitochondria

Q8. Name the drugs that prevent an enzyme's binding site from a substrate.

- (a) Messengers
- (b) inhibitors
- (c) poisons
- (d) receptors

Q9. Name the most stable ecosystem in the biosphere.

- (a) Desert
- (b) Ocean
- (c) Forest
- (d) Mountain

Q10. Name the thread-like structures, which appear inside the nucleus at the time of cell division.

- (a) Asters
- (b) Centrioles
- (c) Spindle fibers
- (d) Chromosomes

Q11. How many autosomes are present in a human being?

- (a) 20 pairs
- (b) 22 pairs

- (c) 23 pairs
- (d) 44 pairs

Q12. The process of cell respiration is carried out by:

- (a) Mitochondria
- (b) Chloroplast
- (c) Nucleus
- (d) None of the above

Q13. Name the organ that secretes insulin from human body.

- (a) Stomach
- (b) Pancreas
- (c) Thyroid
- (d) Intestine

Q14. Which of the following immunity is obtained during a lifetime?

- (a) Acquired immunity
- (b) Active immunity
- (c) Passive immunity
- (d) None of the above.

Q15. Which of the following cells of the immune system do not perform phagocytosis?

- (a) Macrophage
- (b) Neutrophil
- (c) Eosinophil
- (d) Basophil

Q16. Which of the following organs is known as the “graveyard” of RBCs?

- (a) Spleen
- (b) Kidney
- (c) Liver
- (d) Gall bladder

Q.17 Name the cartilage at the end of long bones.

- (a) Calcified cartilage
- (b) Fibrous cartilage
- (c) Hyaline cartilage
- (d) Elastic cartilage

Q18. Which phase does the condensation of chromosomes occur?

- (a) Prophase 1
- (b) Anaphase 1
- (c) Metaphase 1
- (d) None of the above

Q19. The smallest unit of genetic material which produces a phenotypic effect on mutation is

- (a) Gene
- (b) Muton
- (c) Nucleic acid
- (d) Recon\

Q20. What was the type of pea lines used by Mendel?

- (a) True-breeding
- (b) False-breeding
- (c) Not breeding
- (d) Indefinitely breeding

Q21. What type of bond holds together the two strands of DNA?

- (a) Ionic bonds
- (b) Covalent bonds
- (c) Hydrogen bonds
- (d) Peptide bonds

Q22. Which process involves the synthesis of protein from mRNA source?

- (a) Translation
- (b) Transcription
- (c) Replication
- (d) Transformation

Q23. Name the monomers of proteins in a biomolecule.

- (a) Monosaccharides
- (b) Fatty acids
- (c) Amino acids
- (d) Nucleotides

Q24. What is the role of water in chemical reactions in a cell?

- (a) To provide structural support.
- (b) To act as a solvent, facilitating the movement of molecules and ions.
- (c) To provide energy.
- (d) To act as a storage medium.

Q25. Name the organelle responsible for protein synthesis.

- (a) Lysosome
- (b) Ribosome
- (c) Vacuole
- (d) Chloroplast

Q26. Name the type of cell division in which daughter cells receive an exact copy of chromosomes from parent cell?

- (a) Mitosis
- (b) Cleavage
- (c) Interphase
- (d) Meiosis

Q27. Name the protein that holds two sister chromatids at the centromere.

- (a) Securin
- (b) Cohesin
- (c) Separase
- (d) Cyclin

Q28. Name the biological process that converts carbohydrate to end product and produces ATP.

- (a) Photosynthesis
- (b) Glycolysis
- (c) Krebs cycle
- (d) Electron transport chain

Q29. During cell division, the spindle fibres attach to the chromososome region known as:

- (a) Chromocentre
- (b) Kinetochore
- (c) Centriole
- (d) Chromomere

Q30. Define biodiversity?

- (a) The variety of ecosystems found in a specific area.
- (b) The genetic variation within a species.
- (c) The variety of different species within a given ecosystem or on Earth.
- (d) The variety of physical environments in which species live.

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