

MRD-9th (2025)

Time: 3 Hours

BIOLOGY-9th

Marks: 65

Note: There are three sections in this paper i.e, A, B & C?

Version: A

INSTRUCTION:

- Please attempt Section-A on the MCQs Answer Sheet only.
- Only black ball point or marker may be used for shading the relevant circle.
- Please make sure that there is no cutting, over writing, erasing, or multiple circles shading.

Time: 20 Minutes

SECTION-A

Marks: 12

Q1: Choose the correct option i.e, A,B,C or D?

1. Which of the following organism is an example of Monera?
☐ Amoeba ☐ Mushroom
☐ Cyanobacteria ☐ Plasmodium
2. When scientists analyze data, they use it to.
☐ Prove the hypothesis
☐ Reject the hypothesis
☐ Interpret results and draw conclusion
☐ Avoid mistakes and develop report
3. According to Carolus Linnaeus, the highest level in the classification of organisms is.
☐ Class ☐ Kingdom
☐ Order ☐ Family
4. Which of the following is true about tissues?
☐ They consist of unrelated cells
☐ They perform diverse functions independently
☐ They are group of cells which perform same function
☐ They are composed of non-living matter only
5. Which organelles is found in both prokaryotic and eukaryotic cells?
☐ Liposome's ☐ Ribosome's
☐ Mitochondria ☐ Endoplasmic reticulum
6. The main benefit of meiosis in sexual reproduction is.
☐ Making identical ff spring ☐ Creating genetic variation
☐ Increasing chromosome number ☐ Copying the parent exactly
7. At which stage of meiosis does the chromosomes number reduce to half.
☐ Prophase-I ☐ Anaphase-I
☐ Metaphase-II ☐ Telophase-II
8. Mitochondrial enzyme work inside the cell. How should this enzyme be categorized.
☐ Extracellular

- ☐ Intercellular
☐ Both intracellular and extrasacellular
☐ Non functional enzyme
9. Which of the following best describes the process of reduction in an oxidation reduction reaction?
- ☐ Gain of electrons ☐ Loss of electrons
☐ Gain of protons ☐ Loss of protons
10. Which of the following best describe fermentation?
- ☐ Anaerobic respiration in yeast and bacteria
☐ Oxygen dependent breakdown of glucose
☐ Conversion of glucose to pyruvate
☐ Production of ATP in the presence of oxygen
11. The common cause of malnutrition in developing countries is.
- ☐ Too many fruits and vegetables
☐ Access to balance food
☐ Lack of balanced diet knowledge
☐ Plenty of food resources
12. Which plant structure is responsible for absorbing water and minerals from the soil?
- ☐ Stomata ☐ Phloem's tubes
☐ Xylem vessels ☐ Root hairs

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SECTION-B

Marks: 32

Q2: Write short note to any EIGHT of the following parts. All parts carry equal marks?

1. Explain why the cell is considered the basic structural and functional unit of life?
2. How does de forestation impact the climate and biodiversity of Pakistan?
3. Briefly explain structure of cytoplasm in a cell?
4. Briefly explain facilitated diffusion?
5. Which changes take place in cell during prophase of mitosis?
6. What happens to sister chromatids during anaphase of mitosis and the second meiotic division?
7. Briefly explain the term "substrates" in the context of enzymes as biological catalysts?
8. What is photosynthesis, and why it is essential for plants?
9. How does the structure of a villous help in the absorption of food?
10. Define pulse rate?

11. What is the primary function of arteries in the human body?

SECTION-C

Marks: 21

Q3: Answer any THREE questions. All questions carry equal marks?

1. (a) How is ratio used to express the relationship between two quantities of the same kind?
(b) Explain the role of plants in the production of drugs. Provide one example?
2. (a) What is the function of xylem vessels in plants?
(b) Write names of stages of cell cycle?
3. (a) How does a change in PH affect activity of an enzymes?
(b) How do stomata in plant leaves help in the intake of carbon dioxide?
4. (a) Explain the term digestion in digestive system?
(b) What is the significance of antigens in the blood group system?

