

BIOLOGY Paper-IX (26)

ہر سوال کے سامنے چار دائرے دیئے گئے ہیں، صرف صحیح جواب والا دائرہ بھریں۔

۲۔ دائروں کو شیڈ (بھرنے) کے لیے نیلے یا کالے رنگ کا مارکر استعمال کریں۔

۳۔ جواب میں ایک سے زائد دائرے بھرنے سے جواب غلط تصور ہوگا۔

Time: 20 Minutes

SECTION-A

Marks: 12

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

- Photo systems are present in membrane of the:
☐ Nuclear ☐ Plasma ☐ Mitochondrial ☐ Thylakoid
- The phrase "Omnis cellula e cellula" means.
☐ Every cell comes from a cell ☐ All cells are tissues
☐ All cells are spherical ☐ Every tissue comes from a cell
- Krebs cycle and electron transport chain occur in the:
☐ Cytoplasm ☐ Mitochondria ☐ Chloroplast ☐ Ribosome
- The Greek word "entomon" refers to segmented bodies and is related to the study of.
☐ Parasites ☐ Insects
☐ Fossils ☐ Microorganisms
- Division of cytoplasm during cell division is called.
☐ Mitosis ☐ Karyokinesis ☐ Cytokinesis ☐ Meiosis
- A good scientific hypothesis must be.
☐ Always correct ☐ Real answer to question
☐ Based on experiments ☐ Testable
- When a biological name is hand written, it must be.
☐ Bold ☐ Underlined ☐ Italicized ☐ Straight
- Butter, ghee and cheese are rich sources of.
☐ Proteins ☐ Carbohydrates ☐ Fats ☐ Minerals
- Cells involved in photosynthesis must contain.
☐ Nucleus ☐ Mitochondria ☐ Ribosome ☐ Chloroplast
- Chiasmata are the complexes formed by zipping of homologous chromosomes in.
☐ Prophase-I ☐ Metaphase-I
☐ Anaphase-I ☐ Telophase-I
- While observing human cardiovascular system, the largest vein appears to be.
☐ Aorta ☐ Pulmonary vein
☐ Venae cavae ☐ Renal vein
- The process of building up of a larger molecule from smaller ones refers to.
☐ Anabolism ☐ Catabolism
☐ Phototropism ☐ Geotropism

MRD-9th
BIOLOGY 9th (Full Course)

Note: Time allowed for Section-B & Section-C is 2:40 hours.

SECTION-B

Marks: 32

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

1. Enumerate any two systems of both animals and plants.
2. Differentiate between kingdom animalia and kingdom plantae in term of cell wall and mode of nutrition. Also give two examples of each.
3. Enlist any four characteristics of mitochondria.
4. What is filtration? Where does it occur? Also give one importance of it?
5. Define interphase. Also describe the final event that occurs in interphase.
6. What are haploid gametes? Also describe the role of meiosis in production of haploid gametes.
7. Draw graphs showing the effects of pH and concentration of substrates on enzyme activity.
8. Explain the role of water as a raw material in photosynthesis and its formation during respiration.
9. What is egestion? Also enumerate any three sections of colon.
10. Describe bypass surgery and angioplasty as a treatment for myocardial infarction.
11. Define blood plasma. Also name any three plasma proteins along with their functions.

SECTION-C

Marks: 21

Note: Answer any THREE questions. All question carry equal marks.

- Q3:** (a) Describe the ability of viruses to remain inactive for an indefinite period. Also explain why viruses do not perform respiration or excretion.
(b) Explain the terms extremes and means in a proportion solving a biological problem.
- Q4:** (a) State any four characteristics of nervous tissue in animals.
(b) Give any three causes of necrosis.
- Q5:** (a) Describe aerobic respiration as a complete oxidation process. Also mention its starting and final products and energy released.
(b) Show lock and key model diagrammatically in three steps.
- Q6:** (a) Why do patients become weak in thalassemia and why is frequent blood transfusion needed in the disease.
(b) List any three symptoms of ulcer.

