

Note: There are three sections of this paper. Read the instructions carefully and attempt accordingly.

Time: 20 minutes

Section A

Marks: 12

1. Attempt all questions of Section-A by filling the corresponding bubble on the MCQ ANSWER SHEET and return it to the Superintendent within given time, even if you have not attempted any question. Cutting, erasing and overwriting will be awarded no marks.
- i. Cell membrane is made of \_\_\_\_\_  
A) Cellulose only B) Proteins only C) Lipids Only D) Lipids and protein ✓
- ii. During which phase of meiosis, crossing over occurs?  
A) anaphase-I B) telophase-I C) prophase-I ✓ D) metaphase-I
- iii. Pepsin in the stomach works best at a pH \_\_\_\_\_ A) 2 B) 3 C) 4 D) 5 ✓
- iv. Photosynthesis takes place in \_\_\_\_\_  
A) mesophyll cells ✓ B) guard cells C) phloem cells D) all
- v. Deficiency of magnesium in plants leads to \_\_\_\_\_  
A) necrosis B) chlorosis ✓ C) apoptosis d) None
- vi. Which of the following does not manufacture digestive juices?  
A) Aesophagus ✓ B) Stomach C) Pancreas D) Intestine
- vii. Leukaemia is a disease in which \_\_\_\_\_ increase abnormally.  
A) RBCs B) WBCs ✓ C) Platelets D) None of These
- viii. Myocardial infarctions due to blockage of blood flow in \_\_\_\_\_  
A) Aorta B) Pulmonary artery C) Coronary artery ✓ D) hepatic artery
- ix. The group of similar individuals in an area is called a \_\_\_\_\_  
A) Community B) Population ✓ C) ecosystem D) biosphere
- x. A group of organisms that can naturally interbred and produce fertile offspring is known as \_\_\_\_\_  
A) family ✓ B) Genus C) Species ✓ D) taxa
- xi. Maximum bio diversity is found in \_\_\_\_\_  
A) forests ✓ B) grass lands C) deserts D) mountains
- xii. \_\_\_\_\_ are colourless plastids.  
A) Chloroplast B) chromoplast C) leucoplast ✓ D) None of these

1-4 64  
**BN-IX-XIX-I**  
**BIOLOGY — 9th**

Time: 2 Hours 40 Minutes

**SECTION-B**

Marks: 32

2. Attempt any eight of the following. All carry equal marks.
- i. Define histology, parasitology, entomology and genetics.
  - ii. Differentiate between tissues and organs.
  - iii. Write any two importance of bio-diversity.
  - iv. Write a note on kingdom fungi.
  - v. What is chloroplast?
  - vi. Differentiate between simple and compound tissue.
  - vii. What is necrosis?
  - viii. Explain the "induced fit model" of enzyme action.
  - ix. What is glycolysis?
  - x. Write a note on marasmus.
  - xi. Write any four differences between xylem and phloem.

**SECTION-C**

Marks: 21

**NOTE:** Attempt any three of the following questions. All questions carry equal marks.

3.
  - i. Define biophysics, biochemistry, biometry and bioeconomics.
  - ii. Explain binomial nomenclature. What are its advantages?
4.
  - i. Describe connective tissues and its various types.
  - ii. Define cell cycle and in how many phases it is divided?
5.
  - i. Describe the factors which affect the enzyme activities.
  - ii. Explain the dark reactions of photosynthesis process.
6.
  - i. Describe the disorders of the gut.
  - ii. Discuss the function of major arteries and veins.