

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

VERSION: **B**

Instructions:

- Please attempt Section-A on the MCOs 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 Allowed: 20 Minutes"Section - A"Marks: 12

Q.1. CHOOSE the correct option i.e A, B, C or D.

- Seeds absorb water through the:

(A) MicroPyle. (B) Epicondyle (C) Hypocotyl (D) Cotyledons
- Which of the following is an example of discontinuous variation in humans?

(A) Blood group (B) Height (C) I.Q (D) Weight
- The abiotic component used by plants during photosynthesis is:

(A) Temperature (B) Sunlight (C) Soil (D) Gravity
- Which of the following is the main cause of ozone depletion?

(A) Oxides of carbon. (B) Oxides of nitrogen (C) Oxides of Sulphur (D) Chlorofluorocarbons
- Vaccine against hepatitis B virus has been produced through genetic modification from:

(A) Mushroom (B) Yeast (C) Virus (D) Bacteria
- Quinine is extracted from the bark of:

(A) Poppy plant (B) Cinchona plant (C) Foxglove plant (D) Citrus plant
- The effects of which of the following disorders are permanent and irreversible?

(A) Emphysema. (B) Pneumonia (C) Asthma (D) T.B
- Oxalates are present in:

(A) Green vegetables (B) Dry Fruits (C) Cereals (D) Fruits
- Chemical coordination is controlled by:

(A) Hormones (B) Enzymes (C) Lipids (D) Starch
- Which of the following hormones is secreted in emotions and anger?

(A) Insulin (B) Thyroxine (C) Oxytocin (D) Adrenaline
- Muscles which are attached to the bones are:

(A) Cardiac muscles (B) Smooth muscles (C) Skeletal muscles (D) Involuntary muscles
- The cotyledons of maize seedlings are below the soil surface. Which type of germination has occurred?

(A) Epigeal. (B) Hypogeal (C) Intermediate (D) Undetermined

"Section – B"Marks: 32

Q-2. Write short answers to any eight (8) of the following parts. All parts carry equal marks:-

- (i) Why should we breathe through the nose and not through the mouth? Give two reasons.
- (ii) Briefly explain the role of skin as a homeostatic organ.
- (iii) Write down the role of ureter and urinary bladder in the human urinary system.
- (iv) Define nervous coordination and chemical coordination.
- (v) Briefly describe role of the cerebellum in the human brain.
- (vi) Briefly describe the arrangement and functions of ribs.
- (vii) Define parthenogenesis. What do you know about parthenogenesis in honeybees?
- (viii) Describe briefly the phenotype and genotype with examples.
- (ix) Why is population control an urgent issue. Give four reasons.
- (x) What is a single cell protein? Why do people hesitate to use single cell protein in many countries?
- (xi) Categorise antibiotics on the basis of their actions.

"Section – C"Marks: 21

Note: Answer any three (3) questions. All questions carry equal marks:-

- Q-3. (a) Briefly describe the procedure of hemodialysis.
- (b) Name the three types of neurons involved in reflex action.
- Q-4. (a) Describe the role of origin and insertion ends of the muscles?
- (b) Differentiate between grafting and cloning in plants.
- Q-5. (a) Demonstrate phenotypic and genotypic ratio of F-2 generation of a monohybrid cross between pea seeds having yellow and green colors :
- (b) Describe the role of water as a component of ecosystem.
- Q-6. (a) What do you know about fermentation? Define its two types.
- (b) Explain how drug addiction increases the crime rate.