

Write Serial No. of your answer book _____

Time Allowed : 20 Minutes

Maximum Marks : 17

Signature of Deputy Supdt. _____

Note : Use this paper to write the answers to the objective questions. No mark will be awarded for cutting, over-writing or using a pencil. This paper must be tagged with the answer-book.

1. Some possible answers to each statement are given below. Tick (✓) mark the correct answer : 17

- (i) The number of the species of insects are : (53.1% , 17.6% , 19.9% , 9.4%)
- (ii) Optimum pH for enterokinase enzyme is : (2.00 , 4.50 , 5.50 , 6.80)
- (iii) Animals obtain carbohydrates mainly from : (Glycogen, Glucose, Starch, Sucrose.)
- (iv) Resolution of electron microscope ranges between :
(1-2 μm , 1-5.0 mm , 1-3 Angstrom , 2-4 Angstrom)
- (v) rRNA is synthesized and stored in :
(Nucleus, Nucleolus, Endoplasmic reticulum, Lysosome.)
- (vi) Major cells infected by HIV are :
(Leukocytes, Lymphocytes, Helper T-Lymphocytes, Lymphocytes.)
- (vii) Rapid phase of growth of bacteria is :
(Lag phase, Log phase, Stationary phase, Decline phase.)
- (viii) Female gametophyte in angiosperm is also called :
(Archegonium, Ovary, Seed, Embryo Sac.)
- (ix) Condition which leads to heart attack :
(Arteriosclerosis, Atherosclerosis, Hypertension, Obesity.)
- (x) Which of the following is a major structural component of fungus cell wall :
(Cellulose, Peptidoglycan, Chitin, Lignin.)
- (xi) Which of the following is not an accessory pigment :
(Chlorophyll-a, Chlorophyll-b, Xanthophyll, Carotenoid.)
- (xii) If the absorption of water and salts does not take place due to infection, drug action or emotional disturbance, a condition known as :
(Diarrhoea, Vomiting, Dyspepsia, Anorexia.)
- (xiii) HCl is secreted by gastric gland's cells of stomach :
(Mucous cells, Chief cells, Parietal cells, Zymogen cells)
- (xiv) Blue colour respiratory pigment called haemocyanin is present in :
(Arthropoda, Mollusca, Annelids, Echinodermata.)
- (xv) Organ of voice in birds is called : (Vocal cord, Larynx, Syrinx, Lipids.)
- (xvi) The pathway in which RuBP is converted into serine is called :
(Breathing, Photophosphorylation, Photorespiration, Electron transport chain.)
- (xvii) The common name of *Allium cepa* is : (Piyaz, Bathu, Amaltas, Chana.)

Note : All questions are ^{to be} attempted on the answer book.

SECTION - I

2. Write any TWENTY TWO short answers of the following questions :

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- (i) What is biological control?
- (ii) What is a community?
- (iii) Nucleic acids are polymers of units of which component?
- (iv) Make a sketch of general formula of amino acids.
- (v) How does an enzyme accelerate a metabolic reaction?
- (vi) How do irreversible inhibitors check the reaction rate of enzymes?
- (vii) What is stroma in a chloroplast?
- (viii) What is a fluid mosaic model of cell-membrane?
- (ix) What are reverse transcriptases?
- (x) Define species.
- (xi) What is unique about the structure of bacterial ribosomes?
- (xii) What is a trichome in Nostoc?
- (xiii) What is a Giant Amoeba?
- (xiv) What are Foraminiferans and Actinopods?
- (xv) What is mycelium?
- (xvi) What is budding?
- (xvii) Give two characters of Bryophyta.
- (xviii) Define alternation of generations.
- (xix) Differentiate between homosporous and heterosporous.
- (xx) Differentiate between diploblastic and triploblastic organisms.
- (xxi) What is a coelom?
- (xxii) What are hermaphrodites?
- (xxiii) What is the economic importance of mollusca?
- (xxiv) Define photosynthesis.
- (xxv) What is meant by bacteriochlorophylls?
- (xxvi) What is nutrition?
- (xxvii) What is chyme?
- (xxviii) What is photorespiration?
- (xxix) What are spiracles?
- (xxx) What is an apoplast pathway?
- (xxxi) What is osmotic potential?
- (xxxii) What is kPa.
- (xxxiii) What is bleeding in plants?

SECTION - II

Note : Attempt any THREE questions.

3. Explain the biological methods for solving biological problem. 8
4. Describe respiratory system in man. 8
5. Write down the characteristics of cyanobacteria and its economic importance. What do you know about misuse of antibiotics? 8
6. Define Glycolysis and explain it with the help of sketch. 8
7. Define and explain alternation of generation in Bryophytes. Also give its significance. 8