

30% SLOs Based Paper in the Subject of Biology for Class 9th

Encircle the Correct Option.

- 1** The actual answer to the scientific problem is
A Observation B Hypothesis C Data D Conclusion
- 2** Which one is the first in biological method?
A Hypothesis B Experiment C Observations D Deduction
- 3** Deductions are made from;
A Observations B Hypothesis C Experiment D Solution of
result biological problem
- 4** Which one is the basic unit of Classification?
A Genus B Species C Family D Order
- 5** Maximum Bio-Diversity is found in
A Forests B Grasslands C Deserts D Mountains
- 6** Aristotle Classified organisms on the basis of
A Habitats B Cell Structure C Morphology D Anatomy
- 7** The organelle which provide energy to the Cell
A Golgi apparatus B Ribosome C Mitochondria D Nucleolus
- 8** Meiosis takes place in which of the following Organs?
A Lungs B Testes C Heart D Stomach
- 9** One of the following may function as coenzyme for the enzymes.
A Proteins B Carbohydrates C Vitamins D DNA
- 10** The chemicals which are involved as catalysts inside the living bodies are:
A Carbohydrates B Fats C Proteins D Starch
- 11** One of the following may not be required for respiration.
A Oxygen B CO₂ C Enzymes D Food molecule
- 12** Which substance, is used by plants to make proteins?
A CO₂ B Oxygen C Nitrates D Vitamins

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Section B

Q. 1. Attempt any eight of the following Short Questions.

- i. What level of organization is represented by volvox?
- ii. Control Group is important for scientific study. Why?
- iii. what is the status of viruses in classification?
- iv. Differentiate between endocytosis and exocytosis.
- v. Give at least four differences between mitosis and meiosis?
- vi. How are enzymes specific for the substrate?
- vii. What is meant by denaturation of enzymes?
- viii. What is translocation of food in plants?
- viii. Why does a RBC lack cellular organelles?
- ix. In the complete oxidation of one molecule of Glucose into CO_2 and Water the net gain is 36 ATPs. Explain
- x. Explain that the cofactors are the non-protein molecules required by enzymes for their action.

Section C

Q. 2. Attempt any three of the following.

1. A) Describe the factors which affect the enzyme activities.
B) How are the enzymes specific for the substrate?
2. A) Explain the role of oral cavity and pharynx in the digestive system.

B) What is malnutrition? Why it is considered to be a health hazard?
3. A) Discuss different types of tissues found in plants. Elaborate your answer with relevant diagram.
B) How does turgor pressure develops in a plants cell?
4. A) Mitosis results in multiplication of cells with conservation of the number and kind of chromosome. Explain with a diagram.

B) Mitosis results in growth and repair of worn out parts. How?

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Section A

- 1 Waste products excreted by the kidneys are
A Urea, water and salts B Salts, H₂O and CO₂ C Urea and salts D Urea and water
- 2 Which part of the air passage way is also called windpipe?
A Bronchus B Alveolus C Larynx D Trachea
- 3 Microscopic gap between the neuron endings are:
A Transmitters B Synapsis C Pores D Nodes
- 4 Which of these acts as exocrine as well as endocrine gland?
A Pituitary B Thyroid C Adrenal D Pancreas
- 5 The point where the muscles attaches to the fixed bone is called;
A Tendon B Ligament C Insertion D Origin
- 6 Which of these is a part of the appendicular skeleton?
A Pectoral gland B Vertebral column C Ribs D Sternum
- 7 Arthritis is defined as inflammation in :
A Bones B Joints C Cartilage D Muscles
- 8 The various forms of genes responsible for the same trait are called:
A Centromere B Character C Trait D Allele
- 9 Predation helps to maintain balance in ;
A Community B Population C Ecology D Ecosystem
- 10 What term is used for inserting a healthy gene into a person who has a defective gene?
A Cloning B Gene therapy C Vaccination D Fermentation
- 11 Which of these can be used as a vector for inserting a gene into bacteria?
A Plasmid B Algae C Yeast D E . Coli
- 12 Cephalosporins are derived from;
A Fungus B Bacterium C Cannabis D Opium

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Section B

Q. 1. Attempt any eight of the following Short Questions.

- i. Define lithotripsy.
- ii. What is the role of skin in thermoregulation?
- iii. What are the causes of epilepsy and paralysis?
- iv. What is the role of insulin and glucagon?
- v. Differentiate between a skeletal muscle's origin and insertion.
- vi. State the functions of flexors and extensors.
- vii. How does self-pollination bring more variations in plants?
- viii. How are DNA and proteins packed to form a chromosome?
- ix. New combination of genes arise by crossing over. Explain the process.
- x. Conservation is the protection and preservation of natural resources. Why?

Section C

Attempt any three questions of the following.

2. i. What are the causes of respiratory disorders such as bronchitis, pneumonia and lung cancer?
ii. What are kidney stones and how are they formed?
3. i. How are single cell proteins produced and what is their significance?
ii. Why are vectors used in genetic engineering?
4. i. Discuss different types of joints and their role.
ii. State five functions of bones.
5. i. Describe the procedure of using fermentor.
ii. Explain Decomposers as biotic components of an Ecosystem.