

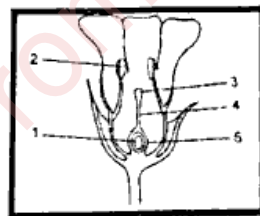
## Section-A

(Attempt all questions from this Section)

## Question-1

Select the correct answers to the questions from the given options. (Do not copy the question. Write the correct answer only): [15]

- (i) Portion of plasma remaining after coagulation of blood are called:  
(a) Spleen (b) Serum (c) Antibodies (d) Antiseptics
- (ii) Industrial wastes containing \_\_\_\_\_ cause abnormalities in the nervous system.  
(a) Calcium (b) Protein (c) Magnesium (d) Mercury
- (iii) Arrange the following part of respiratory system in correct order from head to toe.  
1.Trachea 2.Larynx 3.Nasal passage 4.Bronchi 5. Pharynx  
Code:  
(a) 3,5,2,1,4 (b) 1,2,3,4 (c) 2,3,4 (d) 3,4,5
- (iv) Skin is the sense organ for which of the following:  
(a) Pain (b) Touch (c) Pressure (d) All of these
- (v) State the exact location of Calyx.  
(a) Present as the outermost whorl.  
(b) The whorl of petals just below the sepals.  
(c) The brightly coloured whorl situated innermost.  
(d) The sticky, receptive tip of the pistil.
- (vi) Assertion: The cell wall of bacteria is made up of peptidoglycan.  
Reason: Bacteria do not have mitochondria.  
(a) Both A and R are true and R is the correct explanation of A.  
(b) Both A and R are true but R is not the correct explanation of A.  
(c) A is true but R is false.  
(d) A is false but R is true.
- (vii) Which one of the following pair is mismatched?  
(a) Ovules- Fruit (b) Petals-Wither and fall off  
(c) Petals-Wither and fall off (d) Stamens- Wither and fall off  
(b) Placenta- Stalk of the seed (d) Stamens- Wither and fall off
- (viii) In the diagram below, which numbered parts of the flower continue to develop after fertilisation?



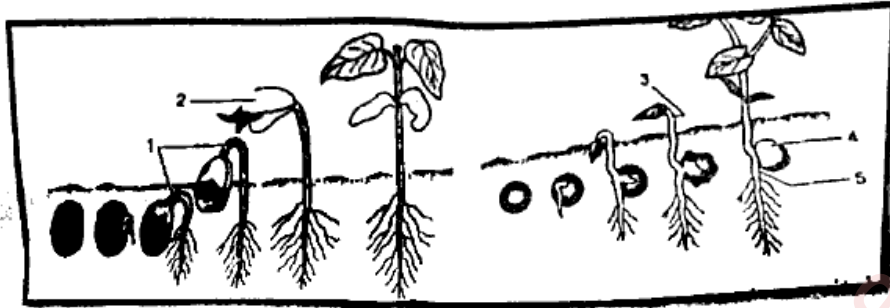
- (a) 1 and 5 (b) 2 and 4 (c) 3 and 5 (d) 4 and 5
- (ix) All Eukaryotic unicellular organism belong to:  
(a) Monera (b) Protista (c) Fungi (d) Bacteria
- (x) Antiserum contains:  
(a) Antibodies (b) Platelets (c) Antigens (d) WBCs
- (xi) During inspiration, the diaphragm:  
(a) Relaxes (b) Contracts (c) Expands (d) Gets folded
- (xii) Which of the following is not a character of Chordata ?  
(a) Dorsal tubular nerve cord  
(b) Presence of Notochord  
(c) Pharyngeal gill slits  
(d) Presence of Spinal cord
- (xiii) A reptile with four chambered heart.  
(a) Crocodile (b) Alligator (c) Tortoise (d) Cobra
- (xiv) Ribosomes are rich in:  
(a) RNA (b) DNA (c) Protein (d) RNA and protein
- (xv) Emulsification of fats occurs due to the presence of:  
(a) Bile salts (b) Biliverdin (c) Pancreas (d) None of these

**Question-2**

[5]

- (i) Name the following:
- An uneasy sensation due to lack of food.
  - A disease spread by Aedes mosquito.
  - The respiratory tubes formed by the division of wind pipe before they enter the lungs.
  - Two free- living bacteria in the soil.
  - The membrane covering the external surface of a bone.
- (ii) Study the diagrams and answer the following:

[5]



[A]

[B]

- Identify the type of germination shown in figure (A) and (B) stating suitable reason for each.
  - Label the parts 1,2.
  - Name the special type of germination which is seen in Sonneratia and describe this germination process.
- (iii) Match the items given in Column I with the most appropriate ones in Column II and rewrite the correct matching pairs.
- |                 |                         |
|-----------------|-------------------------|
| <u>Column I</u> | <u>Column II</u>        |
| (a) Leucocytes  | 1. Low oxygen level     |
| (b) Gymnosperm  | 2. Flowering plant      |
| (c) Hypoxia     | 3. Maltose              |
| (d) Amylase     | 4. Phagocytosis         |
| (e) Vitamin A   | 5. Cone- bearing plants |
|                 | 6. Xerophthalmia        |
- (iv) Choose the odd one out from the following terms and the category to which the others belong:
- Injection needles, Polythene covers, Dried leaves, Mobile batteries.
  - Carbolic acid, Boric acid, DDT, Benzoic acid.
  - Shark, Dogfish, Starfish, Trout.
  - Centrosome, Small vacuole, Mitochondria, Cell wall.
  - Thoracic, Lumbar, Sternum, Sacral.
- (v) Given below are the sets of five terms each. Rewrite the correct order in a logical sequence :
- Nuclear membrane, Cell wall, Cytoplasm, Nucleolus, Cell membrane.
  - Larynx, Pharynx, Bronchioles, Nostrils, Alveoli.
  - Atlas, Coccyx, Lumbar, Axis, Sacrum.
  - Bryophytes, Thallophytes, Angiosperm, Gymnosperm, Pteridophytes.
  - Ovary, Pollen grain, Ovule, Stigma, Style.

**Section-B**

(Attempt any four questions from this Section)

**Question-3**

- Why do we need to manage waste?
- How is nitrogen fixed by bacteria for use by plants? What is this process called?
- What are the causes and symptoms of the disease Kwashiorkor.
- Give two main rules to write scientific names.
- Study the diagram of digestive system:

[1]

[2]

[2]

[2]

[3]

A. Identify the points I,III,IV,V.

	I	III	IV	V
(a)	Gall bladder	Pancreas	Small intestine	Large intestine
(b)	Liver	Pancreas	Large intestine	Small intestine
(c)	Stomach	Liver	Small intestine	Large intestine
(d)	Liver	Gall bladder	Small intestine	Large intestine

B. Villi is present in:

(a) I

(b) III

C. Bile juice is produced by:

(c) II

(d) V

(a) I

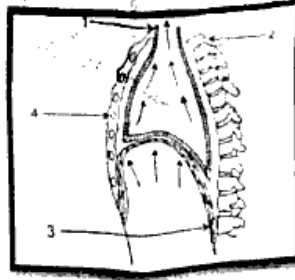
(b) II

(c) III

(d) Both I and II

**Question—4**

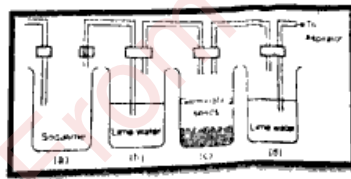
- (i) Why should anyone not sleep under the tree during the night? [1]  
(ii) Which type of carbohydrate cannot be digested in our body? Why is it regarded as the essential component of food? [2]  
(iii) Give two characteristics of cardiac muscle tissue. [2]  
(iv) Explain the terms Vasodilation and Heatstroke. [2]  
(v) Given alongside is the figure of human lung. Guidelines for 1 to 4 parts are indicated below: [3]  
(1) Air rich in CO<sub>2</sub>, (2) Vertebra, (3) Muscles of relaxed diaphragm, (4) Depressed ribs.



- (a) Which state of breathing is represented in the figure?  
(b) What is dead airspace?  
(c) Name the muscle which relax in this process.  
(d) What is the composition of CO<sub>2</sub> in expired air?

**Question—5**

- (i) Some farmers cultivate Gambusia fish. Give reasons. [1]  
(ii) Why is there no enzymes to digest vitamins? [2]  
(iii) Untreated sewage and factory effluents should not be released into water resources. [2]  
(iv) Draw a neat and labelled diagram of the causative agent of AIDS. [2]  
(v) The following set up was arranged to prove a particular physiological process in plants. [3]



- (a) Name the physiological process being studied.  
(b) What is the function of soda lime in the bottle (a) and why is lime water placed in bottle (b)?  
(c) If bottle (c) was fitted with a three holed rubber stopper and a thermometer was introduced in such a way that its bulb reaches close to the germinating seeds, what would you observe?

**Question—6**

- (i) Give example of Sulpha drugs. [1]  
(ii) Name two edible mushroom cultivated in India. [2]  
(iii) Explain three main ideas about cell theory. [2]  
(iv) Give two Economic importance of Earthworm and write the scientific name of Earthworm. [2]  
(v) Study the diagrams and answer the following questions: [3]



- (a) Identify the type of treatments necessary in the situation shown in the diagram.  
(b) Categorise the type of immunity.  
(c) Name the remedy for it.

**Question -7**

- (i) Where are the headquarters of WHO located? [1]  
(ii) Give two characteristics of class pisces. [2]  
(iii) Differentiate between Antiseptics and Disinfectants. [2]  
(iv) Why maize is called a grain and not a seed? [2]

(y) Observe the figure given below and answer the following:

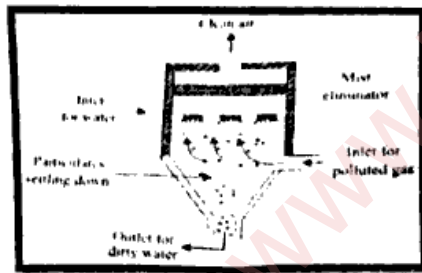
[3]



- (a) Name the type of joint shown in the figure.
- (b) Name the parts 1, 2, 3 & 4.
- (c) Where does the above type of joint found in human body.

**Question -8**

- (i) Give the scientific name of Yeast. [1]
- (ii) How is cholera spread? Give its preventive measures. [2]
- (iii) What are body's own lines of defence? [2]
- (iv) Mention any two contrivances in flowers which favour cross-pollination. [2]
- (v) Given below is a system used for waste disposal. Study the same and answer the questions that follows: [3]



- (a) Name the given system.
  - (b) Give its use in waste disposal.
  - (c) Give some ways of waste prevention and management.
- X-----