

Total No. of Printed Pages : 4

Question Booklet Sl. No.

5201560

**GENERAL SCIENCE, Paper – II**  
**(Biological Science)**  
 (English Version)

Time : 2 Hours

Max. Marks : 70

**Instructions :**

- 1) Question paper consists of 4 Sections and 17 questions
- 2) Internal choice is available only for Q.No. 12 in Section - III and for **all** the questions in Section - IV.
- 3) In the duration of 2 hours, 15 minutes of time is allotted to read the question paper
- 4) All answers shall be written in the answer booklet only.
- 5) Answer shall be written **neatly** and **legibly**.

**SECTION – I**

(6 × 1 = 6)

**Note :** 1) Answer **all** the questions.2) **Each** question carries 1 mark.

1. Which digestive juice is secreted in mouth ?
2. Identify the movement that occurs in this diagram.





3. Mendel had chosen 7 pairs of contrasting characters in pea plants for his experiments. Identify which one of the following is not one among those characters :
- i) Colour of the flower
  - ii) Length of the pod
  - iii) Shape of the seed.
4. Write a slogan to protect Kolleru lake.
5. Natural resources decrease rapidly. Guess a consequence of this condition.
6. Read the following table and answer the question given below.

| Sl.No. | Animal phylum | Excretory organ/Process                |
|--------|---------------|--|
| 1      | Protozoa      | Simple diffusion from the body surface |
| 2      | Arthropoda    | Green glands, Malpighian tubules       |

What is the process of excretion in the phylum protozoa ?

#### SECTION – II

(4×2=8)

- Note :** 1) Answer **all** the questions.  
2) Each question carries **2** marks.

7. Write differences between bolus and chyme.
8. What questions will you ask to a nephrologist to keep your kidneys healthy ?
9. Read the following table.

| Sl.No. | Reproductive Method | Organism              |
|--------|---------------------|-----------------------|
| 1      | Fission             | Paramecium, Bacterium |
| 2      | Budding             | Yeast                 |
| 3      | Fragmentation       | Algae, Fungi          |

Answer the following questions :

- 1) Which organisms reproduce by fragmentation ?
  - 2) Give an example for an organism which performs fission.
10. Guess what would happen if villi are absent in the small intestine ?



## SECTION – III

(5×4=20)

Note : 1) Answer all the questions

2) Each question carries 4 marks.

11. Read the following table.

| Sl.No. | Phase of Mitosis | Changes occur  |
|--------|------------------|--|
| 1      | Prophase         | Chromosomes become visible, chromatids are formed, nuclear membrane disappears |
| 2      | Metaphase        | Chromosomes move to spindle equator  |
| 3      | Anaphase         | Spindle fibres pull chromatids towards poles                                   |
| 4      | Telophase        | Nucleus divides into two, division of cytoplasm starts                         |

Answer the following questions now.

- 1) In which phase of Mitosis, chromosomes become distinctly visible ?
  - 2) Write a change that you observed during Metaphase.
  - 3) In which phase, does nucleus divide ?
  - 4) Which structures do pull the chromatids towards poles in Anaphase ?
12. Draw any one of the following diagrams with labelling.
- A) Internal structure of flower.
  - B) Excretory system in man.
13. Write the differences between sensory (afferent) nerves and motor (efferent) nerves.
14. Why should we conserve forests ?
15. Suggest some methods to prevent soil pollution in view of avoiding pesticides.

## SECTION – IV

(2×8=16)

Note : 1) Answer all the questions

2) Each question carries 8 marks.

3) Each question has an internal choice.

16. Explain the way how plants get water by osmosis through root hair ?

OR

How does sex determination happen in humans ?

3



17. What experiment do you conduct to prove that carbondioxide is required for photosynthesis ?

OR

Observe the given experiment and answer the questions.



- 1) What is the aim of the experiment ?
- 2) What are materials required to conduct this experiment ?
- 3) Write a precaution to get a correct result in this experiment.
- 4) What observation do you make in this experiment ?