

Total No. of Printed Pages 4

Question Booklet St. So.

5201560

# GENERAL SCIENCE, Paper – II (Biological Science)

(English Version)

Time 2 Hours

Max Marks "

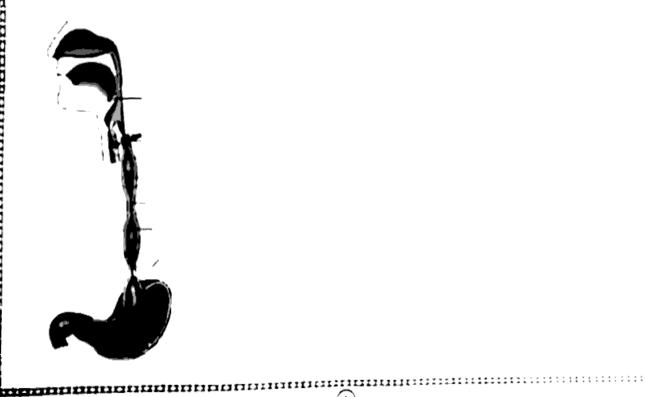
### Instructions :

- 1) Question paper consists of 4 Sections and 17 questions
- 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
- All answers shall be written in the answer booklet only.
- 5) Answer shall be written neatly and legibly.

#### SECTION - I

16/1=4

- Note: 1) Answer all the questions.
  - 2) Each question carries I 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
  - 11) 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                |
|--------|---------------|--|
| ı      | Protozoa      | Simple diffusion from the body surface |
| 2      | Arthropoda    | Green glands, Malpighian tubules       |

What is the process of excretion in the phylum protozoa?

SECTION - 11 (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               |
|--------|---------------------|------------------------|
| ī      | Fission             | Paramoecium, 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

 $(5 \times 4 = 20)$ 

Note: 1) Answer all the questions.

2) Each question carries 4 marks.

## Read the following table.

| SLNo. | Phase of Mitosis | Changes occur  |
|-------|------------------|--|
| ı     | 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.

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?





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?