

(FOR THE CANDIDATES ADMITTED

25UBY1A1

DURING THE ACADEMIC YEAR 2025 – 2028 ONLY) REG.NO. :

N.G.M. COLLEGE (AUTONOMOUS): POLLACHI

END-OF-SEMESTER EXAMINATIONS: NOVEMBER 2025

B.Sc. BOTANY(AIDED)

MAXIMUM MARKS: 75

SEMESTER - I

TIME : 3 HOURS

PART - III

25UBY1A1– INVERTEBRATES AND VERTEBRATES

SECTION – A ($10 \times 1 = 10$ marks)

Answer the following questions:-(K1)

- Which of the following organisms exhibits conjugation?
A) Obelia B) Paramecium C) Taenia D) Pila
- The excretory organ of *Periplaneta americana* is:
A) Nephridia B) Green glands C) Malpighian tubules D) Flame cells
- In *Pila globosa*, the respiratory organs include:
A) Tracheae B) Gills and lungs C) Skin and lungs D) Gills only
- Which of the following is a Prochordate?
A) Herdmania B) Shark C) Frog D) Rabbit
- _____ has the flight adaptation.
A) Calotes B) Columba C) Oryctolagus D) Taenia

ANSWER THE FOLLOWING IN ONE WORD OR A SENTENCE:- (K2) ($5 \times 1 = 5$ marks)

- What type of asexual reproduction occurs in *Paramecium caudatum*?
- Mention one function of antennae in *Periplaneta americana*.
- Name one echinoderm showing radial symmetry.
- What is the function of the notochord?
- Explain the fang in snake.

SECTION – B

(5 X 5 = 25 MARKS)

ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS.(K3)

11. (a) Describe the process of conjugation in *Paramecium caudatum*.

(OR)

- (b) Explain any two protozoan diseases in humans.

12. (a) Sketch the structure of *Taenia solium*.

(OR)

(b) Explain the mouthparts of *Periplaneta americana* with a neat diagram.

13. (a) Explain the respiratory system of *Pila globosa*.

(OR)

(b) Describe the structure of *Asterias rubens*.

14. (a) Point out the general characteristics of *Branchiostomolanceolatum*.

(OR)

(b) Elucidate the digestive system of shark.

15. (a) Explain the heart of *Oryctolagus cuniculus*.

(OR)

(b) Discuss the flight adaptations in birds.

SECTION – C

(5 X 8 = 40 MARKS)

ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS:(K4 ORK5)

16. (a) Explain the structure and feeding mechanism of *Paramecium caudatum* with a diagram.

(OR)

(b) Describe the structure of *Obelia geniculata* with suitable labeled diagrams.

17. (a) Summarize the reproductive systems of *Periplaneta americana*.

(OR)

(b) Explain the lifecycle and reproductive strategies of *Taenia solium*.

18. (a) Discuss the digestive systems of *Pila globosa* with labeled diagrams.

(OR)

(b) Enlighten the structure and functioning of the water vascular system in *Asterias rubens*.

19. (a) Describe the respiratory systems of *Rana hexadactyla*.

(OR)

(b) Discuss the origin and evolutionary significance of amphibians.

20. (a) Explain the reproductive system of *Calotes versicolor* with neat labeled diagrams.

(OR)

(b) Explicate the respiratory systems of *Columba livia* with diagrams.