



**Gandhi Institute of Engineering and Technology University, Odisha, Gunupur
(GIET UNIVERSITY)**

M.Sc. (Third Semester – Regular) Examinations, December – 2025

24MASPC23001– Biology of Invertebrates

(Life Science – Animal Science)

Time: 3 hrs

Maximum: 60 Marks

Answer ALL questions

(The figures in the right-hand margin indicate marks)

PART – A

(2 x 5 = 10 Marks)

Q.1. Answer *ALL* questions

	CO #	Blooms Level
a. What are gastrozooids?	4	2
b. What are the different concepts of origin of coelom?	1	2
c. What is the function of simple eyes in insects?	2	1
d. Differentiate between pseudocoelomates and eucoelomates.	2	4
e. How apiculture plays an important role in Indian economy?	4	5

PART – B

(10 x 5 = 50 Marks)

Answer *ALL* the questions

	Marks	CO #	Blooms Level
2. a. Illustrate the working of the water vascular system for locomotion in echinoderms using suitable diagram.	5	4	2
b. Provide a brief description of the phylum Phoronida. Comment on its similarities and differences with other animal groups.	5	4	4
(OR)			
c. With the help of suitable diagram, describe how torsion helps gastropod in having better respiratory efficiency.	5	4	5
d. Justify the status of <i>Peripetus</i> as a connecting link between annelids and arthropods.	5	4	4
3.a. Briefly discuss the affinities of Ctenophora with other animal groups.	5	1	2
b. What is Schistosomiasis? Draw a well-labelled diagram to illustrate the life cycle of the causative agent.	5	3	3
(OR)			
c. Provide an overview of the biological and medicinal importance of sponges.	5	4	5
d. Elaborate the life cycle of <i>Taenia solium</i> using suitable diagram. Add a note on the available treatments.	5	4	3
4.a. Discuss the significance of larval stages of Holothuroidea. Provide suitable diagrams to support your answer.	5	4	2
b. Provide an overview of the different types of locomotion in arthropods.	5	3	4
(OR)			
c. Elaborate branchial respiration in Mollusca with the help of suitable diagram.	5	4	2

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| d. | With the help of suitable flow chart, describe the life cycle of malarial parasite. | 5 | 3 | 2 |
| 5.a. | Provide a brief note on the economic importance of insects. | 5 | 3 | 2 |
| b. | What are compound eyes? Comment on the working and uses of compound eyes. | 5 | 2 | 2 |

(OR)

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|------|--|---|---|---|
| c. | Imagine yourself as a young entrepreneur who wants to enter sericulture industry. Which silkworm will you select and why? Elaborate the process you will follow for silk production with the help of a flow chart. | 5 | 4 | 4 |
| d. | Coelenterates exhibit high degree of polymorphism. Justify. | 5 | 1 | 5 |
| 6.a. | Provide a detailed overview of Lophophorates. Justify their positioning as a minor phylum. | 5 | 4 | 2 |
| b. | Elaborate apiculture in India. Add a note on the methods used in apiculture. | 5 | 4 | 2 |

(OR)

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|----|---|---|---|---|
| c. | Provide a brief overview of the steps involved in vermicomposting. Add a note on the products of vermiculture and how they contribute to economy. | 5 | 4 | 2 |
| d. | Elaborate the process of pearl production with the help of suitable diagram. | 5 | 4 | 2 |

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