



**Q.1. Give short answers of the following: (15x2=30)**

- i. What is solitary or colonial mode of life in invertebrates?
- ii. What is biramous in Trilobite appendages?
- iii. Differentiate between endo and ecto parasites in invertebrates?
- iv. What is spongocoel?
- v. Differentiate between food vacuole and contractile vacuole in protozoans?
- vi. Differentiate between silicious and calcareous spicules?
- vii. What is Aristotle's lantern in echinoderms?
- viii. What is Gonionemus medusa?
- ix. What is torsion in Mollusca?
- x. Differentiate between sessile and motile in protozoans?
- xi. Write about Syconoid type of canal system?
- xii. Differentiate between prothorax, mesothorax and metathorax?
- xiii. Differentiate between binary and multiple fission in protozoans.
- xiv. Differentiate between determinate and indeterminate cleavage?
- xv. Write about Asteroidea class of Echinoderm?

**Answer the following questions.**

- Q.2** Discuss in detail classification of Platyhelminthes? **(10)**
- Q.3** What are various modes of locomotion in Protozoan? **(10)**
- Q.4** Discuss in detail excretory organs of invertebrates. **(10)**