

**Bago University**  
**Department of Zoology**  
**First Semester Examination, March 2019**

**Second Year BSc**  
**(Zoology Specialization)**  
**Answer ALL questions**

**Zool.2103**  
**Arthropoda**  
**Time Allowed: (3) Hours**

**I. State TRUE or FALSE to the following statements.**

**(10 marks)**

1. The Arthropoda is the largest phylum in the world.
2. A scorpion can survive in the hottest desert.
3. In scorpion, there is two pair of muscles on the cephalothorax.
4. Scorpions are nocturnal animals.
5. There are eight gills lying inside each gill-chamber of prawn.
6. After mating, the female scorpion often devours the male.
7. The vascular system of *Scylla serrata* is an closed system.
8. The female cockroach carries the ootheca for several days.
9. Millipedes are primarily herbivorous.
10. The diplopod eggs are fertilized at the moment of laying.

**II. Complete the following statements with appropriate words.**

**(10 marks)**

1. In Arachnids, abdomen lacks locomotor -----.
2. Decapoda have five pairs of walking -----.
3. Arachnids are very sensitive to -----.
4. The function of statocysts in prawn is to maintain the ----- and position.
5. The prawn continues to feed in water temperature as low as-----.
6. Inspiration and expiration in cockroach take place through the -----.
7. The ovipositor in cockroach is used only to conduct fertilized eggs to ----- chamber.
8. Most of the body segments of millipedes have ----- pairs of limbs.
9. Many millipedes construct a ----- for the deposition of eggs.
10. The brain of millipedes is -----.

**III. Answer ALL questions**

**(10 marks)**

1. Write a short account on solitary behavior of Scorpions.
2. Give a labelled diagram for chelicera of Scorpion.
3. Mention about the body cavity of Scorpion.
4. State briefly on thermal resistance of *Macrobrachium rosenbergii*.
5. Give the systematic position of *Julus*.

**IV. Answer ALL questions**

**(20 marks)**

1. Write an interesting account on nature of Whipscorpion.
2. List the four distinct regions of alimentary canal of Scorpion.
3. Explain about the cerebral ganglion of *Scylla serrata*.
4. Describe about the spiracles in Cockroach.

**V. Answer ANY THREE questions**

**(30 marks)**

1. Explain about the body wall of Scorpion.
2. State briefly the excretory system of Scorpion.
3. Enumerate external characters of male and female Prawns.
4. Write an essay on fertilization and development of Prawn.
5. Describe about the reproductive system of *Scylla serrata*.
6. Explain about the salivary glands in Cockroach with diagram.

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