

P.G. 1st Semester - 2016

**ZOOLOGY**

(CBCS)

Paper : MZOOCCT101

(Non-Chordates : Structure and Function)

Full Marks : 40

Time : 2 Hours

The figures in the right-hand margin indicate marks.

Candidates are required to give their answers in their own words as far as practicable.

1. Answer any eight of the following:  $1 \times 8 = 8$

- a) What is test? Where it is found?
- b) What do you mean by Y-organ?
- c) What is salivarium?
- d) What do you mean by 'Zoarium'?
- e) What do you mean by 'long day insect'?
- f) What is the difference between 'Naiad' and 'Nymph'?
- g) State the importance of MIH.

- h) What is 'Lopophore'?
- i) What is cryptonephridial system?
- j) State the role of tube feet in asteroids.
- k) What is cuticle?
- l) What do you mean by kinetoplast?

2. Answer any six of the following:  $2 \times 6 = 12$

- a) Comment on Tormogen cell.
- b) Write down the ecological importance of Bryozoa.
- c) What is paedogenesis? Cite an example. Where the phenomenon is observed?
- d) Explain 'Extrusomes' with examples.
- e) What is GFP? Mention its source.
- f) Mention the salient features of 'Hemimetabolic metamorphosis' with example.
- g) State the role of Aristotle's lantern as a masticatory organ in echinoids.
- h) Describe the types of haematocytes found in insect.
- i) Comment on the function of trichocyst.

3. Answer any four questions of the following:

5×4=20

- a) Describe with labelled diagram the 'Siphoning' type of mouth parts in insect. 2+3
- b) Name the basic forms of echinoderm larvae. Describe the larval form of Asteroidea. 1+4
- c) What do you mean by 'bioluminescence'? With the help of a flow chart show the mechanism of light production in any bioluminating insect. 1+4
- d) Define osmoregulation. State the physiology of osmoregulation in protozoa.
- e) Why moulting is considered as dangerous period in arthropod's life? Briefly discuss the hormonal regulation of moulting in crustacea. 2+3
- f) Give an account of X-organ SG system in crustacea. 5
- g) What is 'interstitial cells'? Explain the process of 'regeneration' in Hydra. 1+4
- h) Describe the excretory system of cephalopoda with a labelled diagram. 3+2

-----