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MSCZO-611

Entomology (Morphology, Physiology and Development Biology)

M.Sc. Zoology (MSCZO)

4th Semester Examination, 2023 (June)

Time: 2 Hours] Max. Marks: 70

Note: This paper is of Seventy (70) marks divided into two (02) Sections A and B. Attempt the questions contained in these sections according to the detailed instructions given therein. Candidates should limit their answer to the questions on the given answer sheet. No additional (B) answer sheet will be issued.

SECTION-A (Long Answer Type Questions)

Note: Section 'A' contains Five (05) long answer type questions of Nineteen (19) marks each. Learners are required to answer any Two (02) questions only.

 $(2 \times 19 = 38)$

1. Describe a typical integument of insect.

- **2.** Describe a generalized structure of alimentary canal in insects.
- **3.** Write an account of the various organs of excretion in insects.
- **4.** Describe a generalized structure of respiratory system in insects.
- **5.** Describe a generalized structure of reproductive system in insects.

SECTION-B

(Short Answer Type Questions)

Note: Section 'B' contains Eight (08) short answer type questions of Eight (08) marks each. Learners are required to answer any Four (04) questions only. (4×8=32)

- 1. Describe a generalized structure of Nervous system in insects.
- **2.** Explain the embryonic and post embryonic development in insects.
- **3.** Write a short note on :
 - (a) Ommatidium of insect.
 - (b) Auditory organs.

- **4.** Explain the different type of larvae, pupa and metamorphosis in insects.
- **5.** Describe the exocrine and endocrine glands of insects.
- **6.** Write a short note on the following :
 - (a) Sex pheromones.
 - (b) Courtship pheromones.
- **7.** Briefly generalized the structure of circulatory system in insect.
- **8.** Write a short note on the following:
 - (a) Wing Coupling.
 - (b) Light producing organs.