

Roll No.

DD-783

**M. Sc. (Fourth Semester)
EXAMINATION, 2020**

ZOOLOGY

(Group—D)

Paper Third

(Entomology)

Time : Three Hours

Maximum Marks : 80

Note : Attempt all the *five* questions. First question is based on all four Units. All questions carry equal marks.

1. Write short notes on the following :

- (i) Piercing-Sucking Mouthparts
- (ii) Salivary glands of insects
- (iii) Humoral immunity
- (iv) Hemimetabolous metamorphosis

2. Describe the various types of heads in insects.

Or

Write short notes on any *two* of the following :

- (a) Cuticle
- (b) Types of antennae
- (c) Siphoning mouthpart

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3. Describe the structure and functions of circulatory system of insects.

Or

Write short notes on the following :

- (a) Malpighian tubules
- (b) Haemolymph

4. Give a detailed account of various sound producing organs of insects.

Or

Write short notes on the following :

- (a) Physiology of vision in insects
- (b) Endocrine glands in insects

5. Write an essay on 'Effects of Pesticides on Central Nervous System'.

Or

Write short notes on the following :

- (a) Important pests of 'Soyabean'
- (b) Paurometabolous metamorphosis

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