

M.Sc.(Zoology) Third Semester (old)  
**MSC11-1 - Special Group- Entomology-I Paper-XI**  
**(Insect Morphology and Physiology) Zoo-11**

P. Pages : 1

Time : Three Hours



**GUG/W/18/2318**

Max. Marks : 80

- Notes :
1. All Que. are compulsory.
  2. All Que. carry equal marks.
  3. Draw well labelled diagram wherever necessary.

1. Describe in detail Insect integument its Molecular structure and Moulting. **16**

**OR**

Write notes on.

- a) Wing structure and Mechanism.
- b) Insect Legs and genitalia.

2. Give the account on structure of salivary gland add a note on Mechanism of digestion. **16**

**OR**

Write a notes on

- a) Tracheal and Aquatic respiratory mechanism.
- b) Hemolymph cellular and chemical composition.

3. Give a account on structure and anatomy of brain. **16**

**OR**

Write notes on

- a) Physiology of excretion.
- b) Pheromones chemistry and function.

4. Give a account on Viviparity and parthenogenesis. **16**

**OR**

Write notes on

- a) Types of larvae and pupae.
- b) Spermatogenesis and vitellogenesis.

5. Attempt the following. **16**

- a) Abdomen.
- b) Feeding mechanism.
- c) Metamorphosis.
- d) Germ band Formation.

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