

15432



IV Semester B.Sc. Examination, September/October 2022
(Semester Scheme) (CBCS) (2019 and 20 Batch)
Paper – IV : SERICULTURE
Physiology of Mulberry and Silkworm

Time : 3 Hours

Max. Marks : 80

Instructions : 1) Answer *all* questions.

2) Draw diagrams *wherever* necessary.

I. Answer the following questions. (5×1=5)

- 1) What is transpiration ?
- 2) Name any one growth inhibitor.
- 3) What is the function of taenidium ?
- 4) What is the role of alary muscles ?
- 5) Define holometabola.

II. Write short notes on **any five** of the following. (5×3=15)

- 6) Stomata.
- 7) Boron.
- 8) Photochemical reaction center.
- 9) Spiracle.
- 10) Role of sun light on mulberry growth.
- 11) Olfactory receptor.
- 12) Haemolymph composition.

III. Answer **any six** of the following. (6×5=30)

- 13) Write an account on the physiological role of nitrogen.
- 14) Explain the mechanism of N₂ fixation by free living micro-organisms.
- 15) Explain the biochemical composition of mulberry leaf.
- 16) Explain the importance and applications of plant growth regulators on mulberry.

P.T.O.

15432



- 17) Explain the structure and function of excretory system in silkworm.
- 18) Explain the mechanism of respiration in insects.
- 19) Write an account on the structure and function of accessory glands.
- 20) Describe the ultra structure of skeletal muscles.

IV. Answer **any three** of the following.

(3×10=30)

- 21) Explain the significance, mass production and application of VAM.
 - 22) Write an account on non cyclic photophosphorylation.
 - 23) Explain the structure and function of cryptonephridial arrangement. Add a note on its role in water regulation.
 - 24) Explain the structure and mechanism of circulatory system.
-