

(8 pages)

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M.Sc. (CBCS) DEGREE EXAMINATION, APRIL 2020.

Fourth Semester

Zoology

Elective – SERICULTURE

(For those who joined in July 2017 onwards)

Time : Three hours

Maximum : 75 marks

PART A — ($10 \times 1 = 10$ marks)

Answer ALL questions.

Choose the correct answer :

1. The head quarters of the Central Silk Board is situated in
 - (a) Mysuru
 - (b) Chennai
 - (c) Bengaluru
 - (d) New Delhi

2. The ideal conditions of temperature and humidity for rearing *Bombyx mori* is respectively
- (a) 24–28°C and 70-85%
 - (b) 30–32°C and 70-85%
 - (c) 35–37°C and 70-85%
 - (d) 24–28°C and 25-30%
3. The fodder plant preferred by domesticated Eric silk worm is
- (a) Polyanthus leaves
 - (b) Terminalia leaves
 - (c) Castor leaves.
 - (d) Mulberry leaves.
4. *Bombyx mori* comes under the order
- (a) Hymenoptera
 - (b) Lepidoptera
 - (c) Ephemeroptera
 - (d) Coleoptera

5. Which among the following ensures a healthy silk worm rearing stock?
- (a) Dry humidity-free conditions
 - (b) Direct and strong current of air
 - (c) Bright and direct sunlight
 - (d) Equable temperature and humidity
6. The fungus identified as the causative agent of root rot disease of Mulberry plants is
- (a) *Pythium insidiosum*
 - (b) *Bacillus thuringiensis*
 - (c) *Botryodiplodia theobromae*
 - (d) *Scymnus pallidicollis*
7. Grasserie is caused by
- (a) *Beauveria bassiana*
 - (b) *Fusarium solani*
 - (c) Nuclear polyhedrosis virus
 - (d) *Nosema bombycis*

8. The silk worm rearing room disinfectant invented by the Central Silk Board is
- (a) Ghar Sodhon
 - (b) Nimbucidin
 - (c) Tagban
 - (d) Biovir
9. Sericin is a
- (a) Lipid
 - (b) Lipo-protein
 - (c) Protein
 - (d) Glue that holds together silk fibres
10. A regional sericulture research station of the Central Silk Board in Tamil Nadu is situated in
- (a) Erode
 - (b) Salem
 - (c) Kancheepuram
 - (d) Chennai

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Describe any two varieties of silk worms.

Or

- (b) What is the chemical composition of silk?
What are its applications?

12. (a) How does the application of pesticides affect silk worms? How is it mitigated?

Or

- (b) Describe the methods and techniques used in moriculture.

13. (a) How will you measure and maintain humidity in a rearing house?

Or

- (b) What is the role of extension agencies in sericulture?

14. (a) Which are the diseases that threaten silk industry? How can they be prevented?

Or

- (b) Name any two pests of silkworm. How are they managed?
15. (a) Give an account of the cocoon processing methods in silk industry. How does it affect the quality of silk?

Or

- (b) What are the objectives and mechanisms of cocoon drying?

PART C — ($5 \times 8 = 40$ marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Describe the life history of the silk worm.

Or

- (b) Sketch, label and describe the silk glands of *Bombyx mori*.

17. (a) Give an account of techniques promoted by the Central Silk Board to augment Mulberry farmer's income.

Or

- (b) Give an account of the activities and programmes of the Central Silk Board.

18. (a) Describe the procedures followed in silkworm culture.

Or

- (b) Give an account of the different programmes of the Central Sericulture Board.

19. (a) Give a brief description of the pests and diseases affecting silkworms.

Or

- (b) Discuss how the science of transgenesis can be applied to improve sericulture.

20. (a) Write short notes on any four of the following.

- (i) Denier.
- (ii) Renditta.
- (iii) Shell ratio.
- (iv) Reelability.
- (v) Grainage.

Or

(b) Explain the components and working of a multi-end reeling machine.
