

UG 5th Semester Examination 2021

ZOOLOGY (Honours)

**Paper : SEC-1 A/B
(Sericulture / Apiculture)
[CBCS]**

Full marks: 40

Time: Two Hours

The figures in the margin indicate full marks.

Candidates are required to give answers (by selecting either SEC 1-A: Sericulture Or SEC 1-B: Apiculture) with their own words as far as practicable.

SEC 1-A: Sericulture

1. Answer any *twelve* questions: $\frac{1}{2} \times 12 = 6$

- a) _____ is the silk city of India (Fill in the blank).
- b) The Central Sericulture Research Station is located in _____ (Fill in the blank).
- c) Muscardine is a fungal disease of silk worm. (True/False)
- d) Name the hormones that regulate silk secretion.
- e) Which part of silk gland has secretory function?
- f) Write the scientific name of the silk moth that produces Tassar silk.
- g) The lifespan of an adult '*Bombyx mori*' is of _____ days (Fill in the blank).
- h) The unit used for measuring the thickness of silk filament is _____ (Fill in the blank).
- i) Chemically the central part of silk fibre consists of _____ (Fill in the blank).
- j) Name the type of silk only found in Assam.
- k) Herold's gland is found in _____ larva (Fill in the blank).
- l) The rejected fibres during reeling are called _____ (Fill in the blank).
- m) Charkha is a type of reeling appliance. (True/False)
- n) Give any one example of bacterial disease in silkworm.
- o) Silk gland is a modified _____ (Fill in the blank).
- p) The silkworm larva ceases to eat and begins spinning silk all over its body from outside to inside. (True/False)
- q) Reeled filaments of silk are accumulated into units called _____ (Fill in the blank).
- r) The cocoon without pupa is called _____ (Fill in the blank).

2. Answer any *four* questions: $2\frac{1}{2} \times 4 = 10$

- a) What is Chandraki? Write down its advantages and disadvantages. $1 + 1\frac{1}{2} = 2\frac{1}{2}$
- b) Differentiate between exotic and indigenous races of silkworms.
- c) What is moriculture? How to select appropriate mulberry plant variety for silkworm rearing? $1 + 1\frac{1}{2} = 2\frac{1}{2}$

- d) Write the physical and chemical nature of silk.
- e) Give a short note on Uzi fly as a pest of silkworm.
- f) Write the causative agent and symptoms of any one fungal diseases of silkworm.
- g) Briefly write about the role of formalin and bleaching powder in sericulture.

3. Answer any *six* questions:

4×6 =24

- a) Describe the silk gland with suitable diagram.
- b) Write a note on voltinism.
- c) Describe the life cycle of *Bombyx mori*.
- d) Briefly explain the rearing operation in the sericulture industry.
- e) Write the causative agent, symptoms and control measures of Pebrine disease
(1+2+1=4)
- f) Discuss briefly about two minor pests of silkworm with damaging nature.
- g) Give a chart showing scientific name of four species of silkworm (one from each group) along with the type of silk produced by them.
(1+1+1+1=4)
- h) Give a brief account on moutage.
- i) Elaborate in detail the process of harvesting and storage of cocoon.
2+2=4
- j) Enumerate the prospects of sericulture in India.

SEC 1-B: Apiculture

1. Answer any *twelve* questions:

$\frac{1}{2} \times 12 = 6$

- a) Royal jelly is a milky secretion produced by _____ honeybees. (Fill in the blank)
- b) The place where bees are kept and cultured is called _____ (Fill in the blank).
- c) Number of queen in a bee hive is _____ (Fill in the blank).
- d) In movable bee hive, _____ provides entrance for the bee (Fill in the blank).
- e) Mention one use of Apitoxin.
- f) Honey bee has four wings. (True/False).
- g) The drones of honey bee are produced from fertilized egg. (True/False)
- h) Sting in worker bee is a modified organ of queen's _____ (Fill in the blank).
- i) The common name of *Apis florea* is _____ (Fill in the blank).
- j) Who decoded the honey bee dance language?
- k) The pollen basket of honeybee is found on _____ leg. (Fill in the blank).
- l) Which worker category undulate wings to keep the comb cool?

- m) Mention one enemy of honey bee.
- n) Sac brood is an example of viral disease. (True/ False)
- o) In which caste of honey bee honey-spoon is found?
- p) Give the scientific name of largest bee.
- q) Honey is _____ in nature. (acidic/alkaline)
- r) Which structure of honey bee is responsible for storing sperms after mating?

2. Answer any *four* questions: 2½ × 4 = 10

- a) Discuss the role of Bee Pasturage.
- b) Write a short note on Nuptial flight.
- c) What are the uses of propolis?
- d) How to select appropriate bee species for Apiculture?
- e) What is queen substance? State its role. 1+1½=2½
- f) Write the causative agent and symptoms of Nosema disease. (1+1.5)
- g) Briefly write about honey dew.

3. Answer any *six* questions: 4×6 =24

- a) Define Apiculture. Indicate the social hierarchy of bee colony. 1+3=4
- b) Give a brief account of different species of honey bees.
- c) Elaborate in detail the account of division of labour in worker bees.
- d) What is bee wax? List the equipment required to set up an apiary. 1+3=4
- e) Write the composition of honey. Mention its uses. 2+2=4
- f) Write the causative agent, symptoms and control measures of any one bacterial disease in honey bee. 1+2+1=4
- g) Describe briefly the Langstroth Frame hive with diagram.
- h) Briefly discuss the Waggle dance in honey bee.
- i) What do you mean by supersedure? Write the characteristic features of drone. 1½ + 2½=4
- h) What is bee bread? Mention the causes of swarming. 1+3=4