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GIET UNIVERSITY, GUNUPUR – 765022

B.Sc (Ag) (Fourth Semester) Examinations, June' 2021

ENT-223 – Management of Beneficial Insects

Time: 2 hrs

Maximum: 50 Marks

The figures in the right hand margin indicate marks.**PART – A****Q.1. Fill in the blanks with suitable word / figure.****(0.5 x 10 = 5 Marks)**

- Pebrine disease in silkworm is caused by
- Maximum lac producing state is.....
- Cultivation of mulberry plants is called.....
- Tree top disease is the peculiar symptom of the.....
- India have monopoly insilk
- Central Silk Board is located at.....
- gland of worker bee secrete Royal Jelly
- Father of Modern Bee Keeping in India is.....
- The highest yielding species honey bee is
- Native of *Apis mellifera* is.....

Q. 2. Define (or) Explain the following in one or two sentences.**(1 x 5 = 5 Marks)**

- Dupion silk
- Swarming
- Renditta
- Shellac
- Phunkai

Q3. Match the following**(0.5 x 10 = 5 Marks)**

Column – A			Column – B	
(a)	Strain of lac		(i)	Killing of silkworm cocoon
(b)	Tukra disease		(ii)	Bacteria
(c)	Uzi fly		(iii)	Denier
(d)	Stifling		(iv)	Kusumi
(e)	Black boxing		(v)	Karl von Frisch
(f)	Queen substance		(vi)	Enemies of silkworm
(g)	Green commandos		(vii)	Entomogenous nematode
(h)	Fineness of silk yarn		(viii)	Mealy bug
(i)	Dance language of bees		(ix)	Mandibular gland
(j)	American foul brood		(x)	Uniform hatching

Q 4. Write True or False against each statement

(0.5 x 10 = 5 Marks)

- a. One L.E for *H. armigera* is 6×10^9 PIB
- b. In India beekeeping was introduced in 1882 in Bengal
- c. Queen honey bee has triangular abdomen.
- d. *Apis mellifera* construct parallel comb
- e. Workers honey bees are sterile females.
- f. Silk is secreted from labial glands.
- g. 1st and 2nd instar of silkworm are infested by Uzi fly.
- h. One Trichocard contains 20,000 parasitised eggs.
- i. *Apanteles* sp. are egg parasitoids.
- j. A mature lac has a yellow spot on the anterior cell.

PART – B

Attempt ANY FIVE questions. All question carries equal marks

(6 x 5 = 30 Marks)

- 5. Briefly explain the mode of action of virus pathogens in insects. Why microbial insecticides are not popular with farmers?
- 6. What are major species of honey bee found in India. Mention their characteristics with importance.
- 7. What is Sericulture and write its importance. Briefly explain the types of silkworms which are commercially exploited for successful cocoon production in Odisha.
- 8. List out the five important mulberry varieties for silkworm rearing and package of practices for mulberry cultivation under rainfed condition.
- 9. Explain the taxonomic position of lac insect and its inoculation methods.
- 10. Explain the seasonal management of honey bees in an apiary.

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