



BRAINWARE UNIVERSITY

Term End Examination 2023-2024

Programme – B.Sc.(Ag)-Hons-2021

Course Name – Management of Beneficial Insects

Course Code - CC-BAG675 (T)

(Semester VI)

Full Marks : 50

Time : 2:0 Hours

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group-A

(Multiple Choice Type Question)

1 x 20=20

1. Choose the correct alternative from the following :

(i) Show the correct answer: The stingless bees belong to the family

a) Bombycidae

b) Meliponidae

c) Apidae

d) Aphididae

(ii) Show the correct answer: The origin of European bee (*Apis mellifera*) is

a) Italy

b) Spain

c) Germany

d) France

(iii) Show the correct answer: Moveable frame hive was first introduced by L. L. Langstroth in

a) 1751

b) 1800

c) 1851

d) 1881

(iv) Show the correct answer: Sting in worker honey bee is a modification of

a) Ovipositor

b) Anal cerci

c) Respiratory siphon

d) Cornicles

(v) Show the correct answer: Which one among the following is an acarine pest of honeybees?

a) Varroa Mite

b) Spider Mite

c) Eriophyid mite

d) Phytoseiid mite

(vi) Show the correct answer: The largest producer of silk in the world is

a) India

b) China

c) USA

d) Brazil

(vii) Show the correct answer: The high yielding variety of mulberry suited for West Bengal is

a) Kanva-2

b) S-54

c) S-30

d) S-162

(viii) Show the correct answer: Optimum soil pH required for mulberry cultivation is

a) 4.5 to 5.8

b) 6.0 to 6.8

- c) 6.5 to 7.0
d) 7.5 to 8.5
- (ix) Show the correct answer: Preservation of mulberry leaves is required for
a) Providing food during off-season
b) Rearing more numbers of silkworms
c) Producing good quality cocoons
d) All of these
- (x) Show the correct answer: Eri silkworm is reared on
a) Mulberry
b) Som
c) Terminalia
d) Castor
- (xi) Show the correct answer: The two fibroin filaments of silk are held together by a cementing layer called
a) Pectin
b) Sericin
c) Glycerine
d) Gum
- (xii) Show the correct answer: To produce 1 kg of raw silk, the quantity of cocoons required is
a) 7 to 8 kg
b) 8 to 9 kg
c) 9 to 10 kg
d) 10 to 11 kg
- (xiii) Mother moth examination is related to management of which disease of silkworms?
a) Grasserie
b) Flacherie
c) Pebrine
d) Muscardine
- (xiv) Show the correct answer: The worker bee is
a) Sterile female
b) Fertile female
c) Sterile male
d) Fertile male
- (xv) Identify the weed that is controlled by *Zygogramma bicolorata*.
a) Prickly pear
b) Water hyacinth
c) Congress grass
d) Water fern
- (xvi) Identify the parasitoid of woolly apple aphid, *Eriosoma lanigerum*.
a) *Aphelinus mali*
b) *Cryptolaemus montrouzieri*
c) *Spogossia bezziana*
d) None of these
- (xvii) Identify the parasitoid which is released for the control of sugarcane leaf hopper, *Pyrilla perpusilla*.
a) *Trichogramma* spp.
b) *Epiricania melanoleuca*
c) *Scymnus nubilus*
d) *Aphelinus mali*.
- (xviii) Identify the natural enemy of Prickly pear weed.
a) *Dactylopius opuntiae*
b) *Teleonemia scrupulosa*
c) *Asphondylla lantana*
d) None of these
- (xix) Identify the most common host of *Trichogramma japonicum*.
a) Rice yellow stem borer
b) Sugarcane leafhopper
c) Rhinoceros beetle
d) Rice brown planthopper
- (xx) Identify the weed killer of *Eichhornia crassipes*.
a) *Cryptobagus singularis*
b) *Neochetina bruchi*
c) *Procecidochares utilis*
d) *Apion brumneonigrum*

Group-B

(Short Answer Type Questions)

2.5 x

10=25

2. Explain the duties of Queen bee. (2.5)
3. Explain in short about swarming. (2.5)
4. Briefly discuss about the seasonal management in commercial beekeeping. (2.5)
5. Explain in brief about seed lac. (2.5)
6. Construct a short note about scavengers as beneficial insects. (2.5)
7. Explain about the types of scavengers. (2.5)
8. Explain the soil and climatic requirement for mulberry cultivation. (2.5)

9. Explain the methods of harvesting of mulberry leaves. (2.5)
10. Outline the methods implemented for conservation of pollinators. (2.5)
11. Summarize about the considerations for preservation of mulberry leaves. (2.5)

OR

Explain about the slow growth syndrome in silkworms. (2.5)

Group-C

(Long Answer Type Questions)

5 x 1=5

12. Give an elaborate explanation about the biology of Mulberry Silkworm. (5)

OR

Discuss elaborately about the duties of an adult Worker Honeybee with respect to its age. (5)
