GIET UNIVERSITY, GUNUPUR – 765022

B. Sc. (Ag.) (Fifth Semester) Examinations, January – 2023

AC(E)-312 – Bio-pesticides and Bio-fertilizers

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)**

a. Vesicles store phosphorus as …… in VAM.
b. …….. method is used for application of *azospirillum* on paddy transplanting.
c. ……. help in transfer of nutrients from fungus to root systems in VAM.
d. Author of Silent spring book ……
e. Dose of NPV ……..
f. Father of Insect Pathology ……..
g. Bt is highly toxic to……
h. Strain of Bt highly toxic to dipterans ……..
i. Strain of Bt highly toxic to beetles……..
j. Sporulation of Bt completed in …… hours.

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

a. EPF
b. EPN
c. NPV
d. Quality control
e. Biochemicals

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

Column – A			Column – B	
(a)	Xhenorhabdus		(i)	J2 stage
(b	EPN		(ii)	EPN
(c)	Green muscardine		(iii)	Metarhizium
(d)	Plumbagin		(iv)	Botanical
(e)	Pheromones		(v)	Pyrethrum
(f)	Knock down effect		(vi)	Helilure
(g)	Borelina		(vii)	Siderophores
(h)	Microbial		(viii)	NPV
(i)	High-affinity iron-chelating compounds		(ix)	Cut worms
(j)	Mahaneem		(x)	Siderophores

Q4. Write True or False against each statement **(0.5 x 10 = 5 Marks)**

a. The infective stage attacking the host insects in EPN is J3 stage
b. Corcyra eggs are glued in tricho cards
c. Neem is a feeding deterrent. ()
d. BGA are ubiquitous in distribution..()
e. *Hirsutella thompsonii* effectively control lepidopterans()
f. If O.D values are high then cell numbers are less.()
g. Bt is easily multiplied in alkaline media .()
h. Bombykol is produced by gram pod borer .()
i. Frankia is attached with leguminous crops.()
j. Bt produces cry proteins. ()

PART – B

Attempt *ANY FIVE* questions. All question carries equal marks **(6 x 5 = 30 Marks)**

5. What are the specifications required for setting a bio- pesticide laboratory and state the advantages of bio-pesticides
6. What is a biofertilizer? Write the importance of biofertilizers. What are the advantages of biofertilizers over chemical fertilizers?
7. Discuss about the broad classification of pheromones along with examples and advantages.
8. State the reasons for the unpopularity of bio-pesticides among the farmers
9. Write the application technology of biofertilizers.
10. Explain about the botanicals in detail.

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