Gandhi Institute of Engineering and Technology University, Odisha, Gunupur
(GIET University)

B. Sc. (Ag.) (Fifth Semester - Regular) Examinations, November – 2025

ENT 314 – Principles of Integrated Pests and Disease Management

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. _____ is used as a trap crop with cabbage against diamond backmoth.
b. _____ and _____ insecticides are of carbamate insecticides group.
c. Chemicals which are used to kill rodents are called _____.
d. _____ is the father of host plant resistance.
e. The full form of DAS-ELISA is _____.
f. In India, domestic quarantine activities are carried out under specific legislation, such as the _____enacted in 1914.
g. The typical symptom of "Tree top disease" is observed when the insects are attacked by _____.
h. Phenomenon of simultaneous parasitization of host individual by two or more different species of primary parasites at the same time is called _____.
i. *Cryptolaemus montrouzieri* is introduced in India for the control _____ insect.
j. _____ is one of the reasons for pest outbreak.

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

a. Define insect resistance and resurgence.
b. What is the definition of IPM according to FAO?
c. Differentiate monitoring and surveillance.
d. Define ETL and EIL.
e. Write two constraints of implementing IPM.

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

	Column – A		Column – B
(a)	Directorate of Plant Protection, Quarantine & Storage (DPPQ&S)	(i)	Faridabad
(b)	Central Insecticides Board & Registration Committee (CIBRC)	(ii)	New Delhi
(c)	National Institute of Plant Health Management (NIPHM)	(iii)	Entomopathogenic Virus
(d)	National Centre for Integrated Pest Management (NCIPM)	(iv)	Classical biological control
(e)	NPV, GV, CV	(v)	IPM
(f)	Parasitoids affecting the larval stage of host	(vi)	Highly toxic
(g)	Introduction	(vii)	Extremely toxic
(h)	Luckmann and Metcalf	(viii)	Regulates pesticide registration
(i)	Yellow label	(ix)	Hyderabad
(j)	Red label	(x)	Larval parasitoid

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

a. Crop rotation and adjusting planting dates are cultural methods of pest management.

b. Entomopathogenic bacteria is a contact poison for insects.

c. Pyrethrum is extracted from the roots of *Chrysenthemum* plant, as a botanical against insect management.

d. Insect growth regulators and oxadiazines are considered conventional insecticides.

e. Integrated pest and disease management increases the risk of residue hazards in the environment.

f. Periodic release of parasitoids is called inundative release.

g. Drying of seeds below 12% is recommended safe for storage against insect attack.

h. Tin banding in coconut trees is a type of mechanical methods of pest management.

i. Accidental introduction of pests from foreign countries is one of the reasons for insect resistance.

j. Propiconazole and Hexaconazole are the fungicide comes under strobilurins group of systemic fungicides.

PART – B

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

5. Enlist the various components of IPM briefly with examples.

6. Write the process of host plant selection by insects.

7. What is a pest? Classify them on the basis of their occurrence. (1+5)

8. What are the concepts, principles and advantages of IPM.

9. What are the different techniques in biological control and also differentiate between predator and parasitoids. (4+2)

10. Enumerate different diseases and IPDM strategies in rice and sugarcane.

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