

Enrollment No.....



Faculty of Agriculture  
End Sem Examination Dec 2024  
AG3CO34

Principles of Integrated Pest & Disease Management  
Programme: B.Sc. (Hons.) Branch/Specialisation: Agriculture

**Duration: 3 Hrs.****Maximum Marks: 50**

Note: All questions are compulsory. Internal choices, if any, are indicated. Answers of Q.1 (MCQs) should be written in full instead of only a, b, c or d. Assume suitable data if necessary. Notations and symbols have their usual meaning.

		Marks	BL	PO	CO	PSO
Q.1	i. Who gave the first concept of IPM?	1	1	1	1	4
	(a) Frisbie and Adkisson					
	(b) Geierr and Clark					
	(c) Luckman and Metcalf					
	(d) Smith and Pedigo					
	ii. A disease occurring periodically but in a severe form involving major area of the crop is known as _____.	1	1	1	1	1
	(a) Epidemic					
	(b) Pandemic					
	(c) Endemic					
	(d) Pandemic					
	iii. The Pest frequently occurs on a crop is called as-	1	1	1	2	3
	(a) Occasional pest					
	(b) Sporadic pest					
	(c) Seasonal pest					
	(d) Regular pest					
	iv. The manipulation of cultural practices at an appropriate time for reducing or avoiding pest damage to crops is known a _____.	1	1	2	2	1
	(a) Mechanical method					
	(b) Biological method					
	(c) Cultural method					
	(d) All of these					

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v.	The average population of insect over a long period of time unaffected by temporary interventions of pest control. (a) Economic Threshold Levels (b) Damaging Boundary (c) General Equilibrium Position (d) Economic Injury Levels	<b>1</b>	1	2	3	1
vi.	Father of HPR _____. (a) Kogan (b) Rachel Carson (c) R.H. Painter (d) Frisbie and Adkisson	<b>1</b>	1	1	3	11
vii.	Which trap is helps to trap ground beetles? (a) Bait trap (b) Fishmeal trap (c) Probe trap (d) Pitfall trap	<b>1</b>	1	1	4	4
viii.	As an intercrop in Groundnut with bajra will reduce the level of incidence of _____. (a) "Helicoverpa armigera" (b) Stem borer (c) Shoot and root borer (d) Thrips	<b>1</b>	1	1	4	1
ix.	Provides information on pest level over large area is called _____. (a) Fixed plot survey (b) Absolute sampling (c) Roving survey (d) Relative sampling	<b>1</b>	1	1	5	3
x.	Grease banding around mango tree trunk is necessary to control- (a) Mango stem borer (b) Mango mealy bug (c) Mango hopper (d) Mango fruit fly	<b>1</b>	1	2	5	1
Q.2	i. What do you understand by the principles of IPM?	<b>1</b>	1	1	1	4
	ii. Interpret the various categories of diseases.	<b>2</b>	2	1	2	4
	iii. Define IPDM and explain the basic principles of integrated pest management.	<b>5</b>	2	1	1	4
OR	iv. Describe the cultural control method and explain briefly all its points.	<b>5</b>	1	1	2	4
Q.3	i. Briefly describe the ETL and EIL.	<b>1</b>	1	1	2	4

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	ii.	Summarize the horizontal resistance and vertical resistance.	<b>3</b>	1	2	2	4
	iii.	Illustrate the host plant resistance? Explain the mechanism of host plant resistance.	<b>4</b>	1	1	3	4
OR	iv.	Describe the biological control and explain briefly all its points.	<b>4</b>	2	1	2	4
Q.4	i.	Summarize the safe use of pesticides.	<b>2</b>	1	1	3	4
	ii.	Interpret the different classes of quarantine.	<b>6</b>	3	1	3	4
OR	iii.	Describe the physical methods of insect control and explain briefly all its points.	<b>6</b>	3	1	3	4
Q.5	i.	Enlist any five pests accidentally introduced into India with their native place and year.	<b>2</b>	1	2	4	4
	ii.	Briefly describe the Phytosanitary certificate, DIPA, and types of insect's survey.	<b>2</b>	2	2	4	4
	iii.	Illustrate the ecological management of crop environment.	<b>4</b>	3	2	4	4
OR	iv.	Describe the legislative/legal control and explain briefly all its points.	<b>4</b>	3	1	4	4
Q.6		Attempt any two:					
	i.	Enlist general principals of plant disease management and describe eradication and exclusion techniques.	<b>4</b>	3	2	5	4
	ii.	Describe biological methods of plant disease managements with their appropriate examples.	<b>4</b>	3	2	4	4
	iii.	Illustrate the requirements of implementation of IPM and discuss the IPDM model based on any crop with their diseases.	<b>4</b>	3	2	5	4

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## Marking Scheme

### AG3CO34 - Principles of Integrated Pest and Disease Management

Q.1	i)	d. Smith and Pedigo	1
	ii)	a. Epidemic	1
	iii)	d. Regular pest	1
	iv)	d. All of these	1
	v)	c. General Equilibrium Position	1
	vi)	c. R.H. Painter	1
	vii)	d. Pitfall trap	1
	viii)	c. Shoot and root borer	1
	ix)	a. fixed plot survey	1
	x)	b. Mango mealy bug	1
Q.2	i.	1 marks on Definition.	1
	ii.	1 marks on each categories	2
	iii.	2.5 on Definition 2.5 principles in details	5
OR	iv.	1 marks on definition rest of 4 on their methods and types	5
Q.3	i.	.5 for ETL .5 for EIL	1
	ii.	1.5 for Horizontal resistance and 1.5 for Vertical resistance.	3
	iii.	2 marks for define host plant resistance another 2 for explain their mechanisms	4
OR	iv.	2 marks for their definition of biological control another 2 for their procedure steps involve in it.	4

Q.4	i.	2 marks for 4 steps to summarize safe use of pesticides. .5 for each steps.	2
	ii.	Explain at least 3 classes 2 marks for each classes	6
OR	iii.	1 marks each for all points.	6
Q.5	i.	1 marks for native place with insect name and another 1 marks on their year.	2
	ii.	1 marks on Phytosanitary certificate, DIPA and another one marks for types of insects survey involves.	2
	iii.	1 mark for each steps	4
OR	iv.	Describe the Legislative/legal control 2 marks another 2 on summarize their relatives points.	4
Q.6		Attempt any two:	
	i.	2 marks for general principles of plant disease managements another 2 on describe eradication and exclusions.	4
	ii.	1 marks for each steps	4
	iii.	2 marks on each steps	4