

PRACTICE SET

End Semester (5th Semester) Examination, December, 2025

Program: B. Sc. (Hons.) Agriculture

Subject: Principles of Integrated Pest and Disease Management

Subject Code: 13A.311

Course Outcome:

At the end of the course, the students will be able to

CO1: Classify and identify insect pests and plant diseases, and demonstrate an in-depth understanding of Integrated Pest Management (IPM).

CO2: Apply concepts like Economic Injury Level (EIL) and Economic Threshold Level (ETL) to support pest management decisions.

CO3: Compare and select suitable pest and disease control strategies based on crop conditions and sustainability considerations.

CO4: Design and evaluate IPM modules and analyze their practical implications through real-world case studies, with consideration of safety, legal, and social factors.

Unit / Module-1

Section: I (5 Marks questions, only Lower order Thinking -LOT)

Sl. No.	Model Questions	Bloom Taxonomy	CO
1.	Define pest. Enlist the categories of pest.	Remember	CO1
2.	Define pest. Enlist the categories of pest.	Remember	CO1
3.	Define IPM. Enlist the tools of IPM.	Remember	CO1
4.	Explain briefly the economic importance of insect pest.	Understand	CO1
5.	Prepare a flowchart for the stages of Pest risk analysis.	Apply	CO1

Section: II (15 Marks questions, HOT)

Sl. No.	Model Questions	Bloom Taxonomy	CO
6.	Compare the major categories of insect pests and plant diseases, and explain how their biology influences control strategies.	Analyse	CO1
7.	Create a diagram to depict the stages in IPM module and explain them.	Create	CO1
8.	Explain the process of pest risk analysis (PRA) and assess its significance in preventing the introduction of invasive pests, providing an example.	Analyse	CO1
9.	Evaluate the principles of IPM and argue why relying solely on chemical pesticides is insufficient for sustainable pest management.	Evaluate	CO1
10.	Distinguish the role of cultural, biological, and chemical tools in an IPM program and assess their relative advantages and limitations.	Analyze	CO1

Unit / Module-2

Section: I (5 Marks questions, only Lower order Thinking -LOT)

Sl. No.	Model Questions	Bloom Taxonomy	CO
11.	Prepare a flowchart for steps in diagnosis of insect pest damage.	Apply	CO2
12.	Enlist the methods for detection and diagnosis of diseases.	Remember	CO2
13.	Illustrate Economic Threshold Level and Economic Injury Level.	Apply	CO2
14.	Calculate EIL in terms of pest population/Ha with the following figures: Management cost per/Acre= Rs. 8000; Market value/Tonne product= Rs. 2000; Crop injury/pest density= 1% defoliation/100 insects; Loss caused by unit injury= 0.02 tonne/1% defoliation; Proportionate reduction in injury by pesticide application= 70%	Apply	CO2
15.	Discuss the factors on which EIL can vary.	Understand	CO2

Section: II (15 Marks questions, HOT)

Sl. No.	Model Questions	Bloom Taxonomy	CO
16.	Create a graph representing EIL, ETL and GEP in respect of number of insects and time. Conclude the graph mentioning the importance of EIL in decision making for IPM.	Create	CO2
17.	Judge the damage caused by insect pest on the basis of their mouthparts. Support your answer with suitable examples.	Evaluate	CO2
18.	Explain in detail detection and diagnosis of plant disease. Recommend methods which help in identifying the causal organism ensuring effective disease management.	Analyse	CO2
19.	Evaluate EIL on the basis of prescribed formula and also show calculations with three examples.	Evaluate	CO2
20.	Explain the different methods used for detection and diagnosis of insect pests and plant diseases. Evaluate their relative effectiveness and limitations in early pest management.	Evaluate	CO2

Unit / Module-3

Section: I (5 Marks questions, only Lower order Thinking -LOT)

Sl. No.	Model Questions	Bloom Taxonomy	CO
21.	Define host plant resistance and give two examples of pest-resistant crops.	Remember	CO3
22.	List four cultural practices used to manage insect pests or diseases.	Remember	CO3
23.	Mention five legislative measures used to prevent the spread of pests.	Remember	CO3
24.	Compare contact and systemic pesticides.	Understand	CO3
25.	Illustrate application of conventional chemical pesticides insect pest management along with two examples.	Apply	CO3

Section: II (15 Marks questions, HOT)

Sl. No.	Model Questions	Bloom Taxonomy	CO
26.	Design a pest management strategy for a selected crop using host plant resistance, ecological management, and appropriate control methods. Justify your approach.	Create	CO3
27.	Analyze the use of biological control agents in an IPM program. Discuss factors that influence their effectiveness.	Analyse	CO3
28.	Explain the risks and benefits of conventional chemical pesticides in insect pest and disease management. Suggest ways to minimize environmental impact.	Evaluate	CO3
29.	Develop an integrated control plan combining mechanical, cultural practices, and chemical control for a pest outbreak scenario. Explain the reasoning behind your choices.	Create	CO3
30.	Formulate separate tables for classification of insecticides based on toxicity and stage specificity and explain them in detail.	Create	CO3

Unit / Module-4

Section: I (5 Marks questions, only Lower order Thinking -LOT)

Sl. No.	Model Questions	Bloom Taxonomy	CO
31.	Define the terms surveillance and forecasting.	Remember	CO4
32.	Define survey and enlist its types.	Remember	CO4
33.	Discuss the importance and components of pest surveillance.	Understand	CO4
34.	Apply your knowledge to illustrate the safety issues in pesticide use.	Apply	CO4
35.	Compare fixed plot survey and roving plot survey.	Understand	CO4

Section: II (15 Marks questions, HOT)

Sl. No.	Model Questions	Bloom Taxonomy	CO
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36.	Discuss the political, social, and legal implications of adopting IPM practices at regional or national levels. How do these factors influence farmer adoption and policy formulation?	Evaluate	CO4
37.	Plan an IPM module for insect pest and diseases of rice crop.	Create	CO4
38.	Judge the case history of IPM in Cotton at Ashta village, Andhra Pradesh with respect to IPM of Groundnut in Anantapur village, in the state Andhra Pradesh.	Evaluate	CO4
39.	Explain the development and validation of IPM module for Pigeon Pea.	Analyse	CO4
40.	Explain the effects of using an IPM module in a region that usually relies on chemical pesticides. Explain the benefits and problems for farmers, consumers, and the environment. Suggest ways to improve the positive effects.	Analyse	CO4

SUMMARY SHEET:

CO WISE

CO	Question No.	Marks
CO1	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	100
CO2	11, 12, 13, 14, 15, 16, 17, 18, 19, 20	100
CO3	21, 22, 23, 24, 25, 26, 27, 28, 29, 30	100
CO4	31, 32, 33, 34, 35, 36, 37, 38, 39, 40	100
TOTAL		400

UNIT Wise

CO	Question No.	Marks
UNIT1	1-10	100

UNIT2	11-20	100
UNIT3	21-30	100
UNIT4	31-40	100
TOTAL		400

BLOOM'S Taxonomy Level (BTL) Wise

BTL	Question. No.	Marks
LOT	1, 2, 3, 4, 5, 11, 12, 13, 14, 15, 21, 22, 23, 24, 25, 31, 32, 33, 34, 35,	100
HOT	6, 7, 8, 9, 10, 16, 17, 18, 19,20, 26, 27, 28, 29, 30, 36, 37, 38, 39, 40	300
TOTAL		400

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Disclaimer: - This is a practice set. The Question in End semester examination will differ from the practice set. This practice set is meant for practice only.