

Answer all Questions

Time: 03 Hours

Section A

1. Name a Hemipteran and Dipteran pest that you have observed in your crop plots.
2. What action you have taken to prevent the outbreak of these insect pests.
3. What are the recommended insecticides against these insect pests? Give the trade and generic names and the recommended dosage of these insecticides?
4. Indicate the colour of the label you found on each of the insecticide container you used against these insect pests?
5. Is it mandatory to use colour labels on insecticide bottles?
6. What is the main purpose of using colour labels on insecticide bottles?
7. The colour labels may give wrong information to farmers. What are the possible consequences of using red label in insecticide bottles?
8. Name the common predator of the Hemipteran pest you mentioned?
9. It is expected that you assess the predator population in the field before spraying the insecticide. How did you assess the population?
10. What is the recommended economic threshold level of the Hemipteran pest you found in the crop?
11. List two methods that you have adopted to monitor insect population in your field?
12. Describe briefly one of the methods you used to monitor insect pests?
13. What is the drawback of these methods?
14. Describe briefly the methods you use to preserve insect specimens in the laboratory for further reference?
15. Why preservation of insects is necessary?

16. What are the contents of a killing bottle?
17. How do you dry insect specimens for preservation?
18. It is recommended to have border crops along the main crop. In What way border crops help in pest management?
19. "Growing cruciferous crops as border crop may have a negative influence on cabbage crop" Discuss
20. Yellowing of leaves was observed in the okra plants in the adjoining field of your plot. Suggest the possible reasons for yellowing and the ways to overcome the effect.

Section B

1. a). Name two fungicides and their rates of application, that you have used to control fungal pathogens in your field?
b) Name and classify two important pathogens that you have observed in your crop plot.
c) What information are required to manage any pathogens effectively?
d) Briefly describe a procedure that you would adapt to test the antibiotic resistance of a pathogenic bacteria in the laboratory conditions.
 2. You are given three cultures; one of *Colletotrichum* sp, one of *Fusarium* sp and one of *Xanthomonas* sp. Your lab partner thinks it would be fun to combine the three cultures into one test tube, and now you are stuck with an impure culture.
 - a) Why is it important that you have a pure culture before starting any further diagnostic tests?
 - b) Describe the procedure to separate the three cultures?
 - c) What procedure could you use to identify each culture?
 - d) You are given PDA and Nutrient Agar plates to study the growth of the above organisms. What plate would you prefer to use and why?
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