

# KERALA AGRICULTURAL UNIVERSITY

B.Sc (Hons.) Ag. 2012 Admission

VI<sup>th</sup> Semester Final Examination- July /August-2015

Time: 3 hours

Marks: 80

Cat. No: Ento.3204

Title: Plant parasitic Nematodes, other non Insect pests & their Management (1+1)

## I. Fill up the blanks

10 x 1 = 10

1. The first ever reported plant parasitic nematode was \_\_\_\_\_
2. The subclass Acari consists of \_\_\_\_\_ and \_\_\_\_\_
3. In root knot nematodes the \_\_\_\_\_ stage juveniles are infective
4. Mites can be differentiated from ticks by the absence of \_\_\_\_\_ present in the first tarsus.
5. Plant parasitic nematodes acts as \_\_\_\_\_ in the disease complex
6. The body of a typical acarine consists of two main regions viz., \_\_\_\_\_ and \_\_\_\_\_
7. The commercially available bacterial nematode biocontrol agent is \_\_\_\_\_
8. \_\_\_\_\_ parrot cuts and feeds on many grains and fruits
9. Give an example for a phytoseiid mite \_\_\_\_\_
10. \_\_\_\_\_ is a carbamate granular nematicide widely used for nematode control.

## II. Write short notes / answers etc. on any TEN

10 x 3 = 30

1. Differentiate the stomato stylet and odonto stylets In nematodes.
2. What are the cuticular structures of nematodes?
3. Differentiate Astigmata and Prostigmata
4. What are the symptoms caused by plant parasitic nematodes?
5. Differentiate Squirrels and Porcupines
6. What is the mechanism of formation of gall due to the feeding of root knot nematode

7. Give the Action of the following
  - a) Fenazaquin
  - b) Carbofuran
  - c) Zinc Phosphide
8. How will you manage Giant African Snail
9. Write down the skeletal classification of plant parasitic nematodes up to family level.
10. What are predatory nematodes?
11. Enumerate Bird pests of fruits
12. Enumerate the biocontrol agents used to manage plant parasitic nematodes

**III. Write short essays on ANY SIX of the following**

**6 x 5 = 30**

1. Describe the Oesophagus of a typical plant parasitic nematode with suitable illustration and their types
2. Describe the biology of any sedentary endoparasitic nematode
3. Differentiate Eriophidae and Tetranychidae
4. Describe the nature of damage and biology of brood mite on chilli. Suggest suitable acaricide for the control
5. Describe the symptoms of damage, host range and management of migratory endoparasitic nematodes in high density multi species cropping system of Kerala
6. Briefly discuss the damage caused by vertebrate pest on crops
7. Discuss Rodent management practices under Kerala Agro ecosystem conditions.
8. Describe the external morphology of mite with a neat diagram

**IV. Write essay on ANY ONE**

**1 x 10 = 10**

1. Nematode parasites associated with banana, symptoms of damage, their association with other organisms and management practices.
2. List out the mite pests of fruit crops in Kerala. Describe the nature of damage, biology and management practices for any two