M.Sc. (Ag.) Plant Protection Examination 2015
Semester -II
Course : AEN - 504
(Insect Ecology)

Time : Three Hours **Full Marks : 50**

Questions are of value as indicated in the margin.

Answer **any five** questions

1. What is the scope of insect ecology? Mention the sub-division of ecology. How insect population is governed by temperature and humidity? 2+2+3+3=10
2. Define population. Mention the different attributes of a population. Discuss on two types of growth curves and their limitations. 2+4+4=10
3. What is Life table? Mention it's attributes. Describe briefly the two types of life table. Justify the necessity of studying life table. 2+2+4+2=10
4. Define ecosystem. Mention the different components of an ecosystem. Describe the trophic structure of a stable aquatic ecosystem. Differentiate between natural ecosystems and agro ecosystems. 2+2+2+4=10
5. What is dispersal? Mention the causes & effect of dispersal and its significance. Describe the patterns of insect dispersion. 2+4+4=10
6. What is Demography? What postulation was made by Malthus? Why the intrinsic growth rate 'r' is required to modify under limited resource? Describe briefly on r-strategists and k-strategists of insect pests. 2+2+3+3=10
7. Differentiate **any five** of the following : 2×5=10
   (a) Hibernation and aestivation
   (b) Habitat and ecological *niche*
   (c) Natality and mortality
   (d) Commensalism and ammensalism
   (e) Matinal and crepuscular insect
   (f) Immigration and emigration
   (g) Urn shaped and bell shaped age pyramid
   (h) Crude density and ecological density
8. Write short notes on **any five** of the following : 2×5=10
   (a) Host-parasite interaction
   (b) Age specific survivorship curves
   (c) Biotic potential
   (d) Significance of generation survival rate
   (e) Influence of light on movement of insects
   (f) Carrying capacity
   (g) Guild of varied taxonomic group
   (h) Density dependent limiting factors of insect population

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