

This question paper contains 4 printed pages.]

5155

Your Roll No.

B.Sc. (Prog.) / III

B

ACP-301

Applied Entomology

(Admissions of 2005 and onwards)

Time : 3 Hours

Maximum Marks : 75

*(Write your Roll No. on the top immediately
on receipt of this question paper.)*

*Attempt five questions in all, including
Question No. 1 which is compulsory.*

1. (a) Differentiate between the following : 2×4=8
- (i) Coleoptera and Hemiptera
 - (ii) Parasite and Parasitoid
 - (iii) Systemic poison and Contact poison
 - (iv) Solitary phase and Gregarious phase of locusts
- (b) Name one order of insects in which the following types of wings are observed. ½×4=2
- (i) Elytra

[P.T.O.]

- (ii) Hemielytra
- (iii) Halteres
- (iv) Tegmina
- (c) Mention the site of pinning of these insects for preservation : 1×3=3
- (i) Butterfly
- (ii) Bug
- (iii) Grasshopper
- (d) Match the disease with the insect vector of the disease (Note : One vector may be the agent for more than one disease) ½×6=3
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|---------------------|-----------------------|
| (i) Chikunguniya | <i>Anopheles</i> sp. |
| (ii) Filaria | <i>Xenopsylla</i> sp. |
| (iii) Malaria | <i>Aedes</i> sp. |
| (iv) Dengue fever | <i>Culex</i> sp. |
| (v) Yellow fever | |
| (vi) Bubonic plague | |
- (e) Give 1-2 word answers w.r.t. cockroach 1×3=3
- (i) Term for egg case

- (ii) Type of metamorphosis
- (iii) Term for body cavity
2. (a) Explain the various castes in colony organisation of termites. 6
- (b) Discuss the methods employed to manage termites. 5
- (c) What is the role of Anti-locust organisation in India towards management of locusts ? 3
3. (a) Discuss the morphology, life-cycle and damage caused by the Khapra beetle to our stored grains. Also give its scientific name. 7
- (b) What is double seed condition ? Name the pest which causes it (scientific name). 3
- (c) Discuss the damage caused and management of the pest in (b) above. 4
4. (a) What is the difference between head louse and body louse ? 2
- (b) Comment on the medical importance of lice in humans. 3
- (c) Give the scientific name of pubic lice. 1

- (d) Discuss the use of bacteria and viruses in biological control with examples. 8
5. (a) How is cultural control of pests achieved by crop rotation, use of trap crops and intercropping? 6
- (b) List the four types of honey bees found in India (scientific names). 4
- (c) Name the four types of silkworms found in India (scientific names). 4
6. Write short notes on any four : $3\frac{1}{2} \times 4 = 14$
- (a) Pesticide formulation
- (b) Safe storage of grains
- (c) Sterile Insect Technique
- (d) Management of *Helicoverpa armigera*
- (e) Bt-based pesticides