

B.Sc. (Honours) Agriculture Examination, 2018

Semester-II

Course No: AEN-121

(Fundamentals of Entomology)

Signature of Centre Superintendent

Roll No. : (in figure) _____ (in words) _____
Student Index No. _____ Regn. No. _____ of _____

Time : Two Hours

Full marks : 50

Questions are of value as indicated in the margin

Part - I
(Objective and Short Answer Type)
(Use only ball point pen)

Time : 30 Minutes

Full marks : 20

- Note:** 1. Answer in question paper itself.
2. Striking, rewriting or overwriting are not allowed in the objective type questions.

1. **Fill up the blanks with most appropriate words :** 1×5=5
- (i) The first abdominal segment of Hymenopteran insects is called _____.
- (ii) Thickened and leathery front wing of insect is called _____.
- (iii) The type of larva which has no legs is called _____.
- (iv) The order devoid of antenna is _____.
- (v) The excretory product of aquatic insects is _____.
2. **Tick (✓) the correct alternatives :** 1×5=5
- (i) Generally insects have open type / closed type of circulatory system,
- (ii) Head and thorax are fused together to form cephalothorax / pterothorax.
- (iii) The mouth part of thrips is sponging type / rasping & sucking type.
- (iv) External wing pads are found in hemimetabola / holometabola type of metamorphosis
- (v) Mesothoracic wings are called fore wing/hind wing.
3. **Short answer type questions (any five) :** 2×5=10
- (i) What is the composition of cuticle?

P.T.O.

(2)

(ii) Mention the characters the order Thysanura

(iii) Write notes on Tentorium.

(iv) What is the importance of pupal stage in insect life?

(v) What do you mean by proleg or false leg?

(vi) Difference between J shaped & S shaped growth curve.

(vii) What is filter chamber?

(viii) Explain a generalized wing venation.

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Part-II
(Descriptive Type)

Time : 90 Minutes

Full marks : 30

Questions are of value as indicated in the margin

Answer any three questions

4. Mention the different type of mouthparts found in insects with example. Describe in brief the mouth parts of bug type with near sketch. Describe in brief any four modifications of insect leg. 2+4+4=10
5. Write the taxonomic features of order coleoptera. Mention six important families of hemiptera with examples. What is the importance of Hymenoptera order in agriculture? 5+3+2=10
6. Define ecology. State in brief the components of environment. What are the effect of abiotic factors on insect life? 2+3+5=10
7. Write difference between (**any four**): 2.5×4=10
- (i) Pterygote and apterygote insect
 - (ii) Cadifera and Ensifera
 - (iii) Electrical and synaptic transmission of nerve impulse
 - (iv) Oligopod and polypod larvae
 - (v) Blattidae and Mantidae
 - (vi) Capitata and clavate antenna
8. Write short notes on (**any four**) : 2.5×4=10
- (i) Cuticular processes of abdomen
 - (ii) Modifications of Insect wing
 - (iii) Societal Structure of white ants
 - (iv) Orientation of Insect Head
 - (v) Why class Insecta is the dominant one in Phylum Arthropoda?
 - (vi) Moulting
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