




المستوى الثانى
كيمياء / علم الحشرات

	TANTA UNIVERSITY FACULTY OF SCIENCE DEPARTMENT OF ZOOLOGY		
	EXAMINATION FOR SOPHOMOR (SECOND YEAR) STUDENTS OF ENTOMOLOGY / CHEMISTRY		
COURSE TITLE	INSECT INTERRELATIONSHIPS WITH OTHER LIVING ORGANISMS	COURSE CODE: EN 2242	
DATE: JUNE, 2017	TERM: SECOND	TOTAL ASSESSMENT MARKS:150	TIME ALLOWED: 2 HOURS

PLEASE NOTE THE EXAM IN Three (3) PAGES

ANSWER THE FOLLOWING QUESTIONS:

The First Question..... (45 Marks)

A. Indicate whether the following statements are true or false. Correct the false one(20 Marks, 2 Each)

- 1) Cannibalism is a very widespread habit among insects.
- 2) Some ants are social insects living in large colonies.
- 3) The male stink bug guards not only the eggs but also the first nymph instars until they become second instars.
- 4) The female chrysomelid beetle, *Acromis sparsa*, just lay eggs and do not care.
- 5) Stable fly that transmits anthrax among horses and cattle.
- 6) Cyclo-propagative biological transmission of pathogens by insect vectors means no multiplication but cyclic changes.
- 7) Tachinid flies are predators of many Lepidoptera larvae.
- 8) The large blue butterfly is the only insect that makes regular transoceanic migration.
- 9) In termite colony, the whole work of the colony is carried by the soldiers.
- 10) Termitophiles are beetle guests found in ant nests.

B. Fill in the blanks with the appropriate words.....(20 Marks, 2 Each)

- 1) Human extreme manifestation of fear of insects is termed.....
- 2) The members of order..... contain cantharadin, which results in blistering of human skin.
- 3) The saliva of piercing sucking mouth parts causes a toxic reaction in the fruit resulted in causing to the grower.
- 4) The plum curculio make a in the apple.
- 5)and.....are major types of chewing insects.
- 6) The human filarial worm transmitted by the black flies can cause blindness.
- 7) The migratory locust, *Schistocera gregaria* has two different phases.....and.....
- 8) remain by day motionless on the trunk of a tree .
- 9) The simplified model of termite life cycle indicates three castes.....and.....
- 10) Plague is essentially a disease of rodents and transmitted by.....

C. Choose from between the brackets the correct answer..... (5 Marks, 1 Each)

- 1) (**bee wax – royal jelly – bee venom**) is used in rheumatoid arthritic treatment
- 2) Urticating hairs are on the integument of (**beetles---caterpillars----ants**).
- 3) (**lice – flea – black fly**) are the most typical of insect ectoparasites that remain in permanent contact with man.
- 4) The larvae of (**Gastrophilus - Haematopinus - Hypoderma**) burrow in the skin of the back of cattle. Tumors under the skin are formed.
- 5) Female (**ear wig--- stink bug---Acromis sparsa**) stays with her offspring until they reach adulthood.

NA → 2/11

The Second Question..... (Total 30 Marks)

A. State whether the following sentences are true or false with correction..... (10 Marks, 2 Each)

- 1) The female yucca moth deposits her eggs in the ovary of the flower; the larvae feed upon fertilized seeds.
- 2) Oligophgous insects feed upon an unlimited number of plant species.
- 3) Aphids can transmit viruses to plants only by mechanical transmission.
- 4) Galls caused by insects constitute pathological conditions caused by toxicogenic insects.
- 5) Black and yellow molds of corn are bacterial diseases transmitted to plants.

B. Fill in the blanks with the appropriate words..... (10 marks, 1 Mark for each blank)

- 1) In *Drosophyllum* sp., insects are attracted toalight upon stems, become entangled in this sticky fluid, and cannot escape.
- 2)plants are those pollinated by insects
- 3) The relationship between acacia plant and ants is known as.....
- 4) Phytophagous insects feed onand
- 5) Entomophagous plants grow mainly in soils poor in nutrients specially
- 6) tend to be showy and smelly, with very characteristic shapes, and often possess nectarines.
- 7) The siphoning or lapping mouth parts of insects that feed on nectar are well-known adaptations, e.g.
- 8) Insects influence the development of plant diseases by direct production of disease,.....or

C. Choose the correct answers in the following..... (10 Marks, 2 Each)

- 1) Plants and insects may have (**harmful – beneficial – both**) relationships.
- 2) The relationships between insects and plants dated back to (**Devonian – carboniferous – Cambrian**) age.
- 3) The bladderwort is carnivorous plant grown in open (**air – water – desert**) near the edges of lakes.
- 4) Some insects suck the sap from the living cells, e.g. (**aphids – bees – grasshoppers**).
- 5) The pitcher plant is the common name of (**Drosophyllum – Nepenthes – Dionaea**).
- 6) The insect victim is digested in by most pitcher plants by secreting enzymes such as (**pepsin – lipase-chitinase**).
- 7) (**Bee – Beetle – Moth**) pollinated flowers are either very large or cup-shaped like the magnolia, or have tight aggregations.
- 8) Insects are one of the principal agents of (**cross – self**) -pollination, because it has increased the frequency of hybridization and variations.
- 9) (**Ecto – Endo**) -symbiosis is the condition when the organism is harbored within the other body.
- 10) Insects transmit plant diseases by (**direct production – disseminating – both**) of diseases.

The Third Question..... (Total 38 Marks)

A. In view of your study, shortly discuss giving examples whenever possible, the fungi pathogenic to insects and their use in biological control(10 Marks)

B. In details explain the insect-borne viruses of human (10 Marks)

C. In only one sentence, define each of the following terms..... (6 Marks, 2 Marks each)

- a) Grasserie disease of the silk worm. b) Brown rot of apples c) Tularaemia

D. Fill in the blanks.....(12 Marks, 1 Mark for each blank)

- 1) Epidemic typhus is caused by and is transmitted by
- 2) The viruses transmitted mechanically to plants are called viruses
- 3) Milky disease of Japanese beetle larvae is disease
- 4) Fire blight disease of apples and pears is caused by the bacterium which becomes active and multiplies forming
- 5) Transmission of the bacterium causing the European foulbrood disease of the honey bee occurs through, and

