### C:\Users\Dr.Abdelwahab\Desktop\Logo Entomology.jpgBenha University, Faculty of Science Entomology Department

### Final Examination, 1st Semester, 2015 Time allowed 1 hour

### General Entomology (111E) 48 Marks

### Date: Thursday, 11/1/2018

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**ملحوظة: الأسئلة في ورقتين ، والإجابة في المكان المخصص لها في الجدول**

### Question 1: Put the sign or x in front of each statement in the column (18 Marks)

|  |  |
| --- | --- |
|  | **THE STATMENT** |
|  | **Moths and butterflies belong to order Hymenoptera.** |
|  | **Spiders and scorpions are close relatives of insects in phylum Hexapoda.** |
|  | **Insects are divided up into 38 orders, or groups.** |
|  | **The largest specimens of modern insects are found in the tropics.** |
|  | **Some insects can live for 25 years.** |
|  | **Freedom of insect's movement is ensured by chitin in the exoskeleton.** |
|  | **In hemimetabolous insects, wings may be completely absent during the first instar.** |
|  | **The majority of insects live in air.** |
|  | **Antennae can be used as tactile organs.** |
|  | **In grasshoppers and cricket's eardrum is located on the tibiae of the hind legs.** |
|  | **If all pairs of legs are equally developed, such legs are called jumping legs.** |
|  | **All adult higher insects have wings.** |
|  | **Many insects eggs develop without fertilization by sperm** |
|  | **Allantoin was extracted from maggots and used as antibiotic.** |
|  | **Larvae of the midge Chironomus contain hemoglobin.** |
|  | **Wings of houseflies move as a unit together during flight.** |
|  | **Insects are the most diverse of all groups of organisms.** |
|  | **Apterygota are more advanced insects than Pterygota.** |

**Question 2: Write the scientific term for each of the following: (15 Marks)**

|  |  |  |
| --- | --- | --- |
| S.T. | | **The Statements** |
|  | **Subclass of primitive and wingless insects.** | |
|  | **The most diverse of all insect orders.** | |
|  | **The longest of all insects.** | |
|  | **Insects having two wings** | |
|  | **The basic respiratory system in insects.** | |
|  | **Sensory structure on the 2nd segment of mosquito antennae.** | |
|  | **Immatures of aquatic insects.** | |
|  | **Class of organisms have six legs** | |
|  | **The strongest of all-natural fibers.** | |
|  | **Spiral Chitin lining trachea.** | |

**Question** **3: What is the difference between (6 Marks)**

1. **Propolis and Allantoin.**
2. **Shellac and Cochineal.**
3. **Maggot therapy and apitherapy.**

**Question** **4: Give reason for the followings (9 Marks)**

1. **Insect must molt periodically.**
2. **Insects play a vital role in the biogeochemical cycling of nutrients.**

1. **Some insect species mimic other species.**
2. **Mosquito larvae spend a long time on water surface.**
3. **Some insects can travel great distances or remain airborne for long periods of time.**
4. **Plant galls made by insects may have economic value.**