### 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 21/1/2016

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

### Question 1: Complete the missing labels (15 Marks)

|  |  |
| --- | --- |
| C:\Users\SCI_DRABDELWAHAB\Desktop\2.pngThe type of metamorphosis is……………… | C:\Users\SCI_DRABDELWAHAB\Desktop\1.jpg |
| C:\Users\SCI_DRABDELWAHAB\Desktop\3.png | C:\Users\SCI_DRABDELWAHAB\Desktop\6.png |
| C:\Users\SCI_DRABDELWAHAB\Desktop\7.jpg | C:\Users\SCI_DRABDELWAHAB\Desktop\8.jpg |
| Comment | Comment |

**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. |
|  | Periodic shedding the exoskeleton |
|  | Their basic respiratory system in insects. |
|  | Development of eggs without fertilization by sperm. |
|  | The stages between molts. |
|  | Coloration, makes some insects hardly noticeable for predators, is called. |
|  | The strongest of all natural fibers. |
|  | A compound from insects used for tanning and dying leather. |

### Question 3: Put the sign or x in front of each statement in the column (18 Marks)

|  |  |
| --- | --- |
|  | **THE STATMENT** |
|  | Spiders and scorpions are close relatives of insects in phylum Hexapoda. |
|  | Insects are divided up into 32 orders, or groups. |
|  | Insects live in Arctic and Ant-arctic Circles, are active only during summer. |
|  | Some insects can run on water surface. |
|  | Male ants can live up to 15 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. |
|  | Each facet of the compound eye represents the surface of a separate eye called ommatidium. |
|  | The antennae of grasshoppers can be longer than the body. |
|  | Antennae can be used as tactile organs. |
|  | In grasshoppers and crickets eardrum is located on the tibiae of the hind legs. |
|  | Bumblebees have “tongues”. For collecting nectar. |
|  | If all pairs of legs are equally developed, such legs are called jumping legs. |
|  | All adult higher insects have wings. |
|  | All plants cannot reproduce without pollination by insects. |
|  | **Allantoin** was extracted from maggots and used as antibiotic. |
|  | **Male and female mosquitoes have piercing and sucking mouth parts.** |
|  | **Wings of houseflies move as a unit together during flight.** |

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### Question 1: Complete the missing labels (15 Marks)

|  |  |
| --- | --- |
| C:\Users\SCI_DRABDELWAHAB\Desktop\2.pngThe type of metamorphosis is hemimetabolus | resp-system |
| C:\Users\Dr Abdelwahab\Pictures\Insect images\cuticle.gif |  |
| C:\Users\SCI_DRABDELWAHAB\Desktop\7.jpg | C:\Users\SCI_DRABDELWAHAB\Desktop\8.jpg |
| Comment Insects could guide the next wave of advances in biomimetic robotics. Small flying robots could one day be used for detecting harmful chemicals. | Comment As consumers, scavengers, and decomposers, insects play a vital role in the biogeochemical cycling of nutrients. Insects help in removing of dead animals and speed up its decomposition by fungi and bacteria. |

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

|  |  |
| --- | --- |
| S.T. | **The Statements** |
| Parthenogenesis | Development of eggs without fertilization by sperm. |
| Instars | The stages between molts. |
| cryptic | Coloration, makes some insects hardly noticeable for predators, is called. |
| Silk | The strongest of all natural fibers. |
| Tannic acid | A compound from insects used for tanning and dying leather. |
| Apterygota | Subclass of primitive and wingless insects. |
| Coleoptera | The most diverse of all insect orders. |
| Stick insects or walking sticks | The longest of all insects. |
| Molting or ecdysis | Periodic shedding the exoskeleton |
| Tracheas | The basic respiratory system in insects. |

### Question 3: Put the sign or x in front of each statement in the column (18 Marks)

|  |  |
| --- | --- |
|  | **THE STATMENT** |
|  | Each facet of the compound eye represents the surface of a separate eye called ommatidium. |
|  | The antennae of grasshoppers can be longer than the body. |
|  | Antennae can be used as tactile organs. |
| x | In grasshoppers and crickets eardrum is located on the tibiae of the hind legs. |
|  | Bumblebees have “tongues” For collecting nectar. |
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| x | All adult higher insects have wings. |
| x | All plants cannot reproduce without pollination by insects. |
|  | **Allantoin** was extracted from maggots and used as antibiotic. |
| x | **Male and female mosquitoes have piercing and sucking mouth parts.** |
| x | **Wings of houseflies move as a unit together during flight.** |
| x | Spiders and scorpions are close relatives of insects in phylum Hexapoda. |
|  | Insects are divided up into 32 orders, or groups. |
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| x | Male ants can live up to 15 years. |
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