



General Entomology 112E

The Answer:

AQ1- Choose the correct answer from the columns and write its symbol (A or B or C) in front of each statement (15 Marks)

The Statements	A	B	C	
Air enters the insect's body through openings known as	Ostia	Spiracles	Trachea	B
Egg development without fertilized by males is known as	Ovipary	Ovovivipary	Parthenogenesis	C
The part Prevents excessive water loss in terrestrial insects?	Accessory glands	Rectum	Gastric caecae	B
Insect blood is	Hemoglobin	Hemolymph	Plasma	B
In female insects, sperms is stored in the	Testes	Spermatheca	Seminal vesicles	B
Insects belong to class	Hexapoda	Arthropoda	Arachnida	A
House flies belong to order	Lepidoptera	Diptera	Thysanura	B
Cockroaches belong to order	Hymenoptera	Dictyoptera	Odonata	B
Midgut is lining inside by ----- layer	Cuticle	Peritrophic membrane	Rectal pad	B
The blood cells of most insects	Kill microbes	Carry O ₂ and CO ₂	Contain hemoglobin	A
The structure lies between the crop and the gastric caecae	Gizzard	Esophagus	Pyloric valve	A
Which structure collects and excretes uric acid	Accessory gland	Rectal pad	Malpighian tubules	C
In male insects, sperm is stored in the	Testes	Spermatheca	Seminal vesicles	C
Ventral nerve cord are located	Ventrally	Dorsally	Laterally	A
An insect's heart is located in	Abdomen	Thorax	Many regions of the body	C

AQ2. Put the sign ✓ or X in front of each of the following statements (10 Marks)

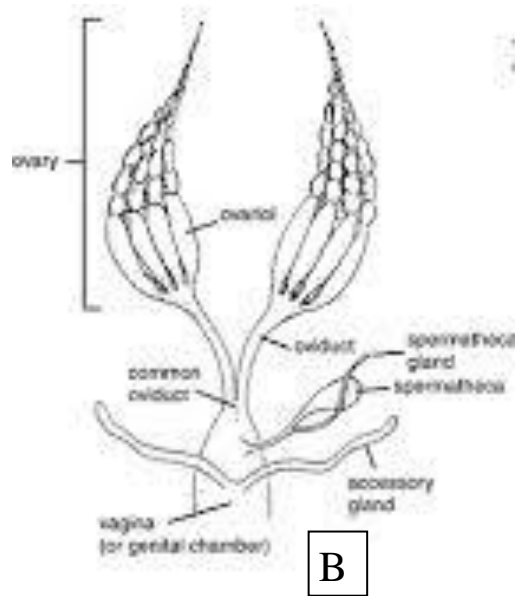
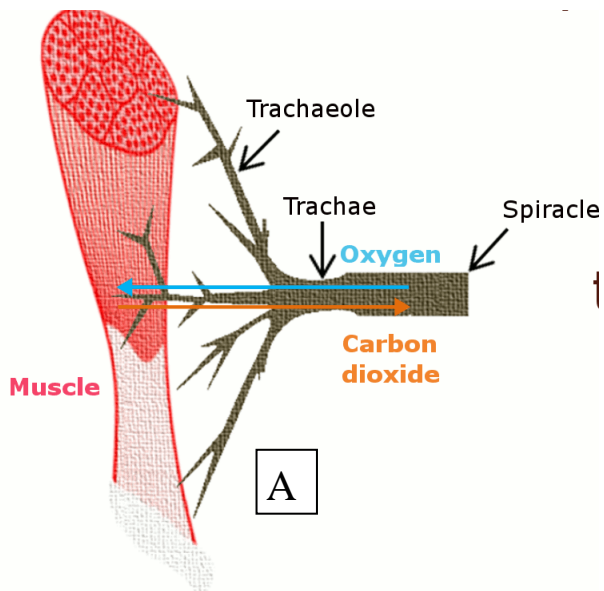
The Statements	
The crop in insects is used to grind the food up into smaller particles.	X
Insects have an open circulatory system.	✓
The hind gut includes ilium, colon and rectum.	✓
The foregut and hindgut of insects are lined with cuticle.	✓
The reproductive organs of insects are similar in structure and function to those of vertebrates	✓
Cockroaches live in kitchen, garbage and put its eggs in ootheca (egg sac).	✓
In some insects, pulsatile organs are located near base of wings or legs to force blood into the extremities	✓

The respiratory system of insects is separate from the circulatory system.	✓
About 60% of insect blood is plasma.	X
In primitive insect orders some ganglia combine into larger ganglia that serve multiple body segments	X

AQ3. Write the scientific term in front of each of the following statements (13 Marks)

Statements	Scientific Term
A thin, wire of cuticle winds spirally through the trachea	Taenidia
Organs located near the base of the wings or legs to force blood out into the extremities.	Secondary pulsating organs
Muscles are attached laterally to the walls of each chamber of the heart	Alary muscles
Structures used to increase the surface area of the midgut	Gastric caeca
A long straight tube running from the mouth to the anus	Alimentary canal
Nerve mass consist of 3 lobes, Protocerebrum, Deutocerebrum and Tritocerebrum	Brain
Valve-like openings on insect bodies used for air entrance	Spiracles
Digestion of food by saliva outside the body of insects.	External digestion
Blind-ending, tube-like appendages of the intestine that open between the mid- and hindgut.	Malpighian tubules
Organ secretes seminal fluid that sustains feeds and protects sperms.	Accessory glands
Insects without wings and without metamorphosis	Apterygota
System is responsible for movement of nutrients, salts, hormone and metabolic wastes throughout the insect body	Circulatory system
Nervous system contains on 3 thoracic ganglia and 6-9 abdominal ganglia	Ventral nerve cord

AQ4. Mention the type of systems and complete the missing labels (10 Marks)



*With best wishes
Dr/ Mohamed M. Baz*