

S.3 BIOLOGY ASSESSMENT TEST

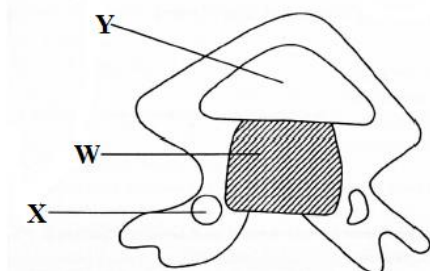
TIME: 90 MINUTES

TOPIC: LOCOMOTION

INSTRUCTIONS: **Attempt all questions**

SECTION A

1. Figure 1 below represents a vertebral bone?



The part labeled X is mainly occupied;

- A. Cartilage
B. Spinal cords
C. Blood vessels
D. Spinal nerve

☐

2. Which of the following organisms relies on a hydrostatic skeleton?

- A. Grass hopper B. Earth worm C. Crab D. Millipede

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3. Rolling and Yawing movements of fish are respectively controlled by the;

- A. Pectoral and tail fins C. Dorsal and pelvic fins
B. Tail and pelvic fin D. Dorsal and ventral fins

☐

4. A police man stretched out his arm to the right to guide smooth flow of vehicles. To cause this motion of the arm his.....

- A. Biceps contracted while the triceps relaxed
B. Triceps contracted while biceps relaxed
C. Biceps and triceps both relaxed
D. Triceps and biceps both contracted.

☐

5. Which of the following is not a characteristic adaptation of insects to flight?

- A. Light C. Strong flight muscle
B. Hollow bones D. Streamlined body

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6. In which region of the mammalian vertebral column does the vertebra with vertebrarterial canals found?

- A. tail region B. Abdominal C. chest region D. Neck region

☐

7. Which of the following characteristics of feathers does not aid flight in birds?

- A. Being water proof C. Being light
B. Being large and broad D. Being fluffed

☐

8. Which of the following organisms uses cilia as structure for locomotion?

- A. Paramecium B. Amoeba C. Euglena D. Earthworm

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9. The following are components of axial skeleton of mammals, except:

- A. Sternum B. Vertebrae C. Ribs D. Girdles

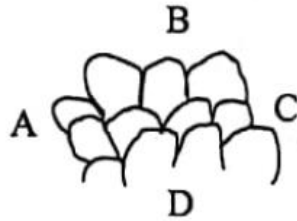
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10. The following events occurs during the upstroke of flapping flight in birds except:

- A. Pectoralis minor muscles contract C. Pectoralis minor muscles relax
B. Pectoralis major muscles relax D. Wings are pulled upward

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11. The figure below shows part of the skin and scales on a fish. The most probable position of the head to the fish is in direction:


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12. The type of muscles found in the gut, excretory systems and blood vessels of a mammalian body is described as

A. striped. B. Skeletan. C. voluntary D. involuntary

☐

13. Which of the following characteristics of feathers does not aid flight in birds?

A. Being water proof C. Being large and broad
B. Being light D. Being fluffed

☐

14. Which one of the following pairs of bones form a ball and socket joint?

A. Humerus and Ulna C. Humerus and radius
B. Femur and pelvis D. Femur and tibia

☐

15. What happens to insect wings when depressor muscles are relaxed? The wings

A. move downwards. C. rotate freely.
B. move upwards D. move in three directions.

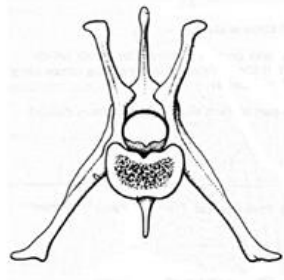
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16. A tendon is

A. a tissue joining bone to bone. C. A tissue joining muscle to muscle.
B. A tissue joining bone to muscle. D. A point where two bones meet.

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17. Figure 1 below is an anterior view of a certain vertebra



The type of vertebra shown in figure above is

A. Cervical vertebra
B. Lumbar vertebra
C. Thoracic vertebra
D. Sacral vertebra

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18. In vertebrates the joint between an axis and atlas vertebrae is known as

A. ball and socket joint. B. hinge joint. C. Pivot joint. D. Gliding joint.

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19. Which of the following is true of an atlas vertebra?

A. It has a prominent neural spine
B. The neural canal is very large.
C. It has a short neural spine.
D. The centrum is modified into odontoid process.

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20. From which of the following regions of the body would you have vertebrae with less developed centra?

A. Thoracic B. Lumbar C. Cervical D. Sacral

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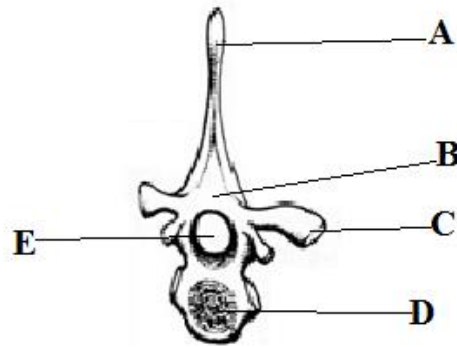
21. Which one of the following pairs of bones form a ball and socket joint?

A. Humerus and Ulna C. Humerus and radius
B. Femur and pelvis D. Femur and tibia

☐

SECTION B

1. The figure 2 below shows a vertebra in a human body.



- (a) Name the parts labeled (05 marks)

A..... B..... C.....
D..... E.....

- (b) State the function of part labeled (03 marks)

A.....
C.....
E.....

- (c) Identify the vertebra (01mark)

.....

- (d) In which region of the human body is the vertebra found? (01mark)

.....

- (e) How is the structure of the vertebra above related to its function? (04 marks)

.....
.....
.....
.....
.....
.....
.....

- (f) Name the vertebra

- (i) posterior to one shown in the figure above. (01mark)

.....

- (ii) anterior to one shown in the figure above. (01mark)

.....

2. (a) State how the fish swims;

- (i) through water (02marks)

.....
.....

(ii) from bottom of sea to water surface

(02marks)

(b). Describe each of the following instabilities faced by fish while swimming and state how each is overcome

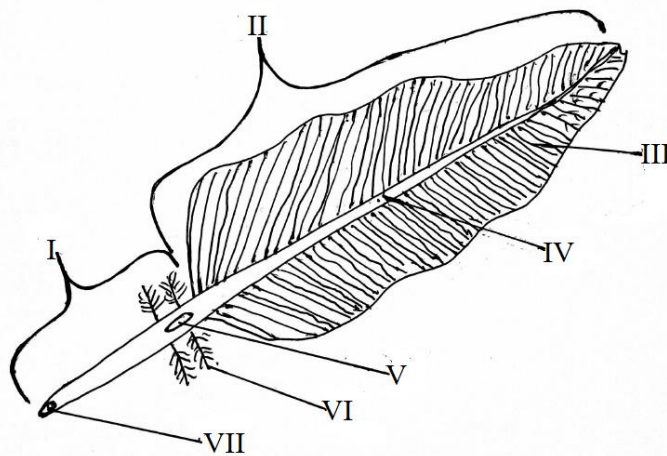
(06 marks)

(i) Rolling

(ii) Pitching

(iii) Yawing

3. The figure below shows a certain type of feather on a bird's body



(a) Name the parts labeled I to VII

(07 marks)

I..... II..... III.....
 IV..... V..... VI.....
 VII.....

(b) With reasons, identify the type of feather shown in the figure above.

Type of feather.....(01 mark)

Reasons (02 marks)

(c) In which part of the bird's body is the feather shown in the figure above found? (01mark)

(d) State the function of the feather shown in the figure above (02 marks)

4. (a) State what happens in each of the following types of flight in birds. (06 marks)

(i) Hovering

(ii) Gliding

(iii) Soaring

SECTION C

5. (a) How are birds adapted to flight? (07 marks)

(b). Describe how flapping flight is brought about in birds. (08 marks)

END!!!

“What men have done, man can do.”

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