

BIOLOGY

BOOKS - BETOPPERS

MOVEMENT IN ANIMALS AND PLANTS

Formative Worksheet

1. Which of the following is an act of locomotion?

| B. Running |
|---------------------------------------|
| C. Flying |
| D. Swimming |
| |
| Answer: |
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| |
| 2. The locomotory organs in amoeba is |
| A. Cilia |

A. Crawling

- B. Wings
- C. Pseudopodia
- D. Tentacles



- **3.** The locomotion due to pseudopodia in amoeba is termed as
 - A. Ciliary

- B. Flying
- C. amoeboid
- D. Crawling



- **4.** Cilia are the locomotory organs in
 - A. Amoeba
 - B. Paramecium

C. Earthworm

D. Hydra

Answer:



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5. Which of the following statements about the body movements of earthworms is incorrect?

- A. They move by extending the front portion of their bodies, while keeping the rear portion fixed to the ground.
- B. They move by extending the rear portion of their bodies, while keeping the front portion fixed to the ground.
- C. Their bodies secrete a slimy substance that helps them in movement.
- D. Their body muscles help them in movement.



- **6.** Which of the following statements about snails is incorrect?
 - A. They move at a very slow pace.
 - B. They move with the help of a thick muscular foot.

- C. The outer shell of snails plays an important role in movement.
- D. The head and foot of snails are out of the shell during locomotion



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7. Which of the following statements about cockroaches is incorrect?

- A. They fly with the help of breast muscles attached to their wings.
- B. They walk with the help of the muscles attached to their legs.
- C. They have two pairs of wings.
- D. They have four pairs of legs.



- **8.** Cockroaches have the ability to fly. Also, they can walk on ground. Which of the following statements regarding movement in cockroaches is correct?
 - A. They fly in air with the help of feathers.
 - B. They fly in air with the help of wings.
 - C. They move with the help of a thick muscular foot.
 - D. They move by extending the front part of their body,



- **9.** Which of the following statements about the body movement of fishes is correct?
 - A. Fins help fishes maintain the balance of body while swimming.
 - B. Gills help fishes maintain the balance of body while swimming.

- C. The streamlined body of fishes helps them change directions while swimming.
- D. The strong muscles attached to the skeleton of fishes help them change directions while swimming.



10. Fishes are aquatic animals. Which of the following adaptations present in a fish does not help in swimming?

- A. Presence of a streamlined body
- B. Presence of a pair of gills
- C. Presence of a tail
- D. Presence of fins

Answer:



11. Fishes are aquatic organisms. Which feature in the body of fishes helps them change directions while swimming?

- A. Gills
- B. Streamlined body
- C. Fins
- D. Strong muscles

Answer:



- **12.** Snakes are terrestrial organisms. Which of the following statements about the body movement of snakes is correct?
 - A. They move with the help of a thick muscular foot.
 - B. They move by continuously extending and shortening their body.
 - C. They move by folding their body into many loops, which gives a forward push to the body.

D. They move by moving the front portion

of their body to one side, while swinging

their tail to the other side.

Answer:



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| | Column A | | Column B |
|-----|----------------|--------------------------------|----------------------------------|
| i | Cockroach | a | Movement with muscular foot |
| ii | Birds | b | Forelimbs modified to wings |
| iii | Snake | c | Wings attached to breast muscles |
| iv | Snail | d | |
| | i ii iii | i Cockroach ii Birds iii Snake | ii Birds b iii Snake c |

The alternatives in the given table can be correctly matched as

- A. i-b,ii-c,iii-a,iv-d
- B. i-b,ii-c,iii-d,iv-a
- C. i-c,ii-b,iii-a,iv-d
- D. i-c,ii-b,iii-d,iv-a



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14. What is the long, hard structure that starts from the neck to the lower back of the body known as?

- A. Backbone
- B. Cartilage
- C. Pelvic bone
- D. Shoulder bone

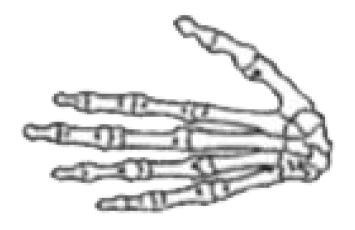


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15. The skeletal system provides shape and rigidity to the body: It also helps in protecting a number of internal organs. Which of the

| following internal organs is not protected by |
|---|
| the ribcage? |
| |
| A. Heart |
| |
| B. Liver |
| Clungs |
| C. Lungs |
| D. Stomach |
| |
| |
| Answer: |
| Watch Video Solution |
| Water video Solution |
| |

16. The given diagram illustrates a part of the human skeletal system. Which of the following functions is performed by the illustrated image?



A. Breathing

B. Holding

- C. Running
- D. Sitting



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17. Which of the following statements about constituents of rib cage is correct?

A. Rib cage consists of chest bones only.

B. Rib cage protects stomach, lungs, and heart.

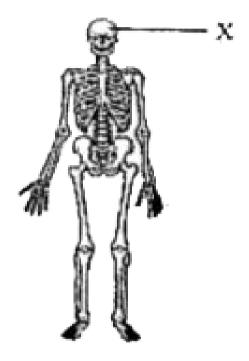
C. Vertebral column alone comprises rib cage,

D. Twelve ribs and backbone constitute rib cage.

Answer:



18. The given figure represents the human skeletal system. In the given figure, label X represents the



A. skull

B. rib cage

C. shoulder bones

D. pelvic bones

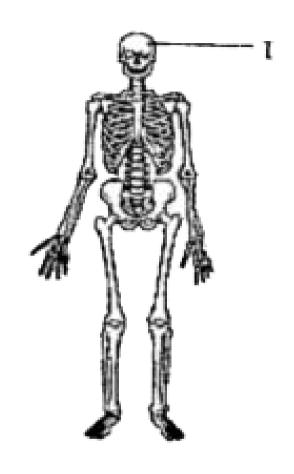
Answer:



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19. The given diagram illustrates the human skeleton. The structure labelled I in the given

diagram illustrates the



A. ribs

B. skull

C. backbone

D. pelvic bones

Answer:



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| | Column A | | Column B |
|-----|-------------|---|----------|
| i | Brain | a | Rib cage |
| fii | Heart | Ъ | Skull |
| iii | Spinal cord | c | Backbone |

20.

A. i-a,ii-b,iii-c

B. i-b,ii-a,iii-c

- C. i-b,ii-c,iii-a
- D. i-c,ii-a,iii-b



- **21.** Which joint is present between the upper jaw and rest of the head
 - A. Fixed joint
 - B. Hinge joint

- C. Pivotal joint
- D. Ball and socket joint



- **22.** Which type of a joint is present in the bones of the head region and upper jaw?
 - A. Ball and socket joint
 - B. Pivotal joint

C. Hinge joint

D. Fixed joint

Answer:



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23. Joints are present between bones in the human body. There are different types of joints such as ball and socket joint, 'hinge joint, pivot joint, and gliding joint. The ball and socket joint is capable of movements in

| infinite directions. The ball and socket joint is |
|---|
| present in the |
| |
| A. shoulder |
| B. elbow |
| D. CIDOV |
| C. neck |
| D. skull |
| D. Skull |
| |
| Answer: |
| |
| Watch Video Solution |
| |

24. Joints are the meeting points of two or more bones. Which joint allows movements in all directions?

- A. Pivotal joint
- B. Ball and socket joint
- C. Hinge joint
- D. Fixed joint

Answer:



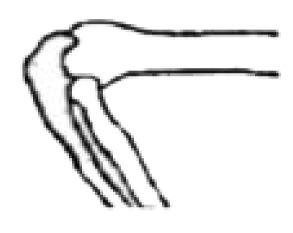
25. Joints are the meeting points of two or more bones. Which joint allows the back and forth movement of the elbow?

- A. Ball and socket joint
- B. Pivotal joint
- C. Fixed joint
- D. Hinge joint

Answer:



26. The given diagram illustrates the knee region in the human skeletal system. Which type of a joint is present in the knee region?



A. Ball and socket joint

B. Pivotal join

- C. Hinge joint
- D. Fixed joint



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27. A student, while studying about different types of joints, wrote the following description about a particular joint X. "The joint allows movement only in four directions (up, down,

back, and forth) similar to a rod rotating in a sing". Joint X represents

A. ball and socket joint

B. pivotal joint

C. fixed joint

D. hinge joint

Answer:



| | Column A | | Column B |
|-----|-----------------------|---|----------|
| _i | Ball and socket joint | a | Neck |
| ii | Pivot joint | ь | Elbow |
| iii | Hinge joint | Ċ | Shoulder |
| iv | Fixed joint | d | Skull |

28.

The alternatives in the given table can be correctly matched as

Answer:



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29. Which of the following statements about muscles is incorrect?

A. They contract to move a bone in a particular direction.

B. They contract to bring a bone to its original position

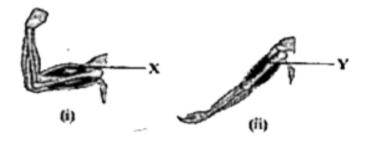
C. They can only push the bone.

D. They can only pull the bone.



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30. The given figure illustrates two arm muscles X and Y at two positions i and ii. During transition from i to ii



A. only the relaxation of muscle Y takes place B. only the contraction of muscle X takes place C. relaxation of both muscles X and Y takes place D. contraction of both muscles X and Y takes place

Answer:



31. Muscles are necessary for the movement of bones. Which of the following statements is correct regarding contraction of muscles?

- A. Bones can move in the absence of muscles.
- B. Muscles become longer and thinner on contraction.
- C. Muscles become shorter and thicker on contraction

D. Bones can move in the presence of only one muscle,

Answer:



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32. In animals, movements occur because of the changes occurring in the proteins present in the muscle cells. In plants, movements occur because of the

- A. changes in the shape of the cell
- B. changes in the organelles of the cell
- C. re-arrangement of the proteins present in the cell
- D. re-arrangement of the carbohydrates present in the cell



33. During the process of seed germination, it is observed that seedlings grow towards the source of light. The phenomenon exhibited by seedlings is known as

- A. gravitropism
- B. phototropism
- C. chemotropism
- D. thermotropism

Answer:



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34. Which of the following plants show movements with flagella?

A. Chlamydomonas

B. Volvox

C. Spirogyra

D. Mosses

Answer:



35. Statement - I: Shoots show positive phototropism. Statement -- II: Roots show negative phototropism.

A. Statement - I is true, Statement - II is false.

B. Statement - I is false, Statement - II is true.

C. Both statements are true.

D. Both statements are false.



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36. The movement in response to gravity is called

- A. phototrophism
- B. geotropism
- C. hydrotropisin
- D. Thigmotropism



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37. The movement of plant parts in response to water is termed as

- A. phototrophism
- B. geotropism
- C. hydrotropism
- D. Thigmotropism



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38. The Mimosa pudica or the touch-me-not plant is a sensitive plant which when touched responds by folding up its leaves. This is an example of growth independent movement. Which event leads to the folding up of leaves in the plant?

A. Movement of water into the cell

- B. Movement of water out of the cell
- C. Movement of chemicals into the cello
- D. Movement of chemicals out of the cell



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39. When Swati touched the leaves of the plant called chhui-mui (touch-me-not), she noticed that the leaves started to fold up and

droop. The given phenomenon is observed because of the

A. response of the plant's nervous system to touch

B. response of the plant's nervous system to touch

because of the movement of water

C. changes in the shape of the plant cells

D. changes in the structural proteins

produced by the piant's specialized cells



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40. The movement shown by the leaves of touch-me-not on being touched is known as ___i___ii___involves the bending of shoots towards a source of light. The information in which alternative completes the given statements?

A. i.- growth-independent movement, ii –

Growth-dependent movement

B.i - growth-dependent movement, ii -

Growth-independent movement

C. i - growth-independent movement, ii -

Growth-independent movement also

D. i-growth-dependent movement, ii -

Growth-dependent movement also

Answer:



Conceptive Worksheet

1. The act of moving from one place to another is called

- A. locomotion
- B. Transpiration
- C. Diffusion
- D. Effusion



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2. Animals need locomotion

A. To search for food

B. To escape from enemies and predators,

C. To move to favourable environment.

D. All the above

Answer:

- 3. Tentacles are the locomotory organs in
 - A. Amoeba
 - B. Paramecium
 - C. Earthworm
 - D. Hydra



| 4. | Locomotion | in | Hydra | is | caused | by | • |
|----|------------|----|-------|----|--------|----|---|
|----|------------|----|-------|----|--------|----|---|

A. looping movement

B. somersault movement

C. Both

D. None

Answer:



- **5.** Which of the following statements regarding movement in carthworms is correct?
 - A. It moves with the help of a thick muscular foot.
 - B. It moves with the help of distinct muscles attached to the legs.
 - C. It moves by fixing its rear portion to the soil and extending its front part,

D. It moves by curving its body into many loops which pushes the body forward.

Answer:



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6. Earthworm lacks legs and bones. Therefore, it moves with the help of muscles that helps in extending and shortening the body. It moves by extending the front portion of the body, while keeping the rear portion fixed to the

ground. Then, it releases the rear portion and fixes the front portion on the ground. Which of the following statements about earthworms is correct?

A. They move with the help of a muscular foot

B. They move with the help of muscles attached to their bones.

C. They move with the help of muscles that help to extend and shorten their bodies.

D. They move with the help of muscles that help in folding their bodies into several loops.

Answer:



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7. Which of the following statements about the body movements of snails is correct?

- A. They move with the help of a thick foot that has strong muscles.
- B. They move with the help of muscles that extend and shorten their bodies.
- C. They move by folding their bodies into several loops, which gives them a push to move forward.
- D. They move by moving their bodies to one side, while swinging their tails to the other side.



- **8.** Which of the following statements about the body movements of cockroaches is correct?
 - A. They move with the help of a thick muscular foot.
 - B. They have streamlined bodies, which helps them swim.

- C. They have hollow and light bones, which helps them fly.
- D. They walk with the help of the muscles attached to their legs.



9. Fishes are aquatic animals that live under water Which of the following features is absent from fishes?

- A. Fins
- B. Tail
- C. Muscular foot
- D. Streamlined body



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10. Fishes are aquatic animals, well adapted to

live under water. Which feature of a fish's body

helps it to keep balance and change direction while swimming?

- A. Presence of strong muscles
- B. Presence of slippery scales
- C. Presence of gills
- D. Presence of fins

Answer:



11. __i__ move with the help of a thick muscular foot __ii__ move by curving their body into many loops where each loop gives a forward push to the body. The information in which alternative completes the given statements?

A. i–Snakes, ii – Cockroaches

B. i-Cockroaches, ii - Fishes

C. i - Fishes, ii - Snails

D. i-Snails, ii – Snakes



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12. The given figure represents a part of the human skeletal system. Which structure is shown in the given figure?



A. Rib cage

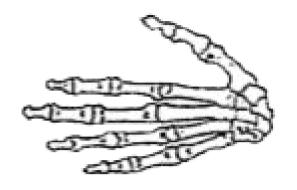
- B. Skull
- C. Backbone
- D. Pelvic bone



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13. The given figure represents a part of the human skeletal system. The given figure

represents the



A. bones of the hand

B. bones of the feet

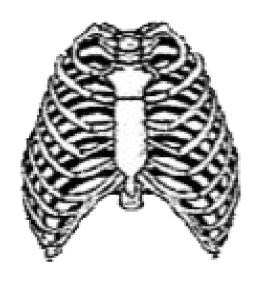
C. rib cage

D. back bone

Answer:



14. The illustrated structure belongs to the



A. skeletal system

B. nervous system

C. muscular system

D. circulatory system

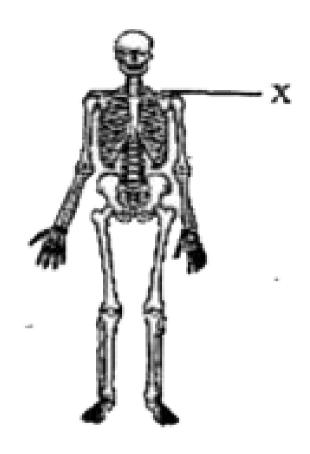
Answer:



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15. The given figure represents the human skeletal system. In the given figure, label X

represents the



A. pelvic bones

B. skull

- C. rib cage
- D. shoulder bones



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16. The rib cage is a part of the skeletal system.

It performs the function of protecting the

- A. heart and the lungs
- B. kidney and the lungs

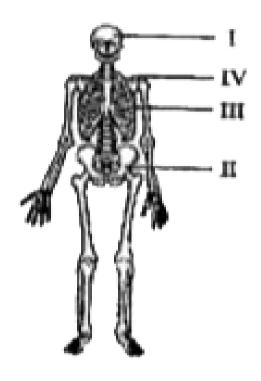
- C. heart and the stomach
- D. kidney and the stomach



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17. The given figure represents the human skeletal system. In the given figure, the pelvic

bones are labelled as



A. I

B. II

C. III

D. IV

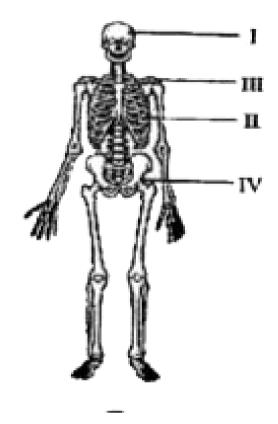
Answer:



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18. The given diagram illustrates the human skeleton. Which labelled structure helps in

protecting the brain?



A. I

B. II

C. III

D. IV

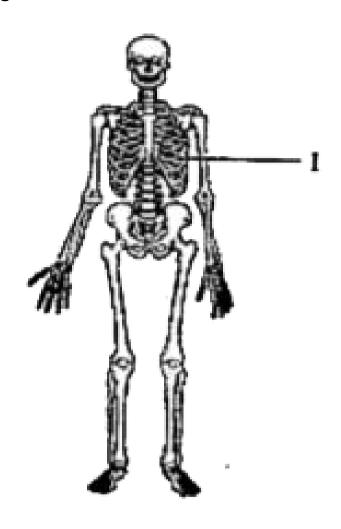
Answer:



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19. The given diagram illustrates the human skeleton. Label I in the given diagram depicts

the



A. ribs

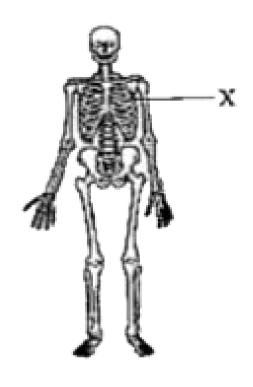
- B. skull
- C. backbone
- D. pelvic bones



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20. The given figure represents the human skeletal system. In the given figure, label X

represents the



A. rib cage

B. skull

C. shoulder bones

D. pelvic bones

Answer:



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21. Which of the following statements about fixed joint is correct?

A. It is present in the elbow region.

B. It is present in the bones of the skull.

C. It allows the movement of arms in all directions.

D. It allows the back and forth movement of the head.

Answer:



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22. Which joint does not allow the movement of bones?

- A. Fixed joint
- B. Hinge joint
- C. Ball and socket joint
- D. Pivot joint



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23. A joint is a place in the body where two or more bones meet. From the following, which joint allows free movement in all directions?

- A. Ball and socket joint
- B. Pivotal joint
- C. Hinge joint
- D. Fixed joint



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24. Joints are the meeting points of two or more bones. Which of the following

statements about ball and socket joint is correct?

A. It is present in the bones of the elbow region.

B. It allows movements in all directions.

C. It is present in the bones of the skull.

D. It allows restricted movement.

Answer:



25. Ball and socket joint is present in

A. backbone

B. shoulder

C. ribs

D. skull

Answer:



26. The joints of the knee allow movement only in a back and forth direction. The type of joint present in the knee region is known as

- A. ball and socket joint
- B. pivotal joint
- C. hinge joint
- D. fixed joint

Answer:



27. Which of the following statements is correct for hinge-joint?

A. It is a type of fixed joint

B. It can move in all directions.

C. It allows movement in right or left only.

D. It allows only back and forth movement.

Answer:



- 28. The pivot joint is present between the
 - A. head and neck region
 - B. shoulder and upper arm
 - C. bones of the elbow region
 - D. bones of the head and upper jaw



29. Which joint allows the movement of head in the forward and backward directions?

- A. Ball and socket joint
- B. Pivotal joint
- C. Hinge joint
- D. Fixed joint

Answer:



30. Sally likes to play tennis. She can move easily while playing tennis because the joints present in human body give her the flexibility to move. Which joint is present in the wrist?

- A. Pivot joint
- B. Hinge joint
- C. Gliding joint
- D. Ball and socket joint

Answer:



31. The locomotory organs in Euglena are

- A. Flagella
- B. Wings
- C. Pseudopodia
- D. Tentacles

Answer:



32. Bones give shape and structure to the body and help in the different body movements. The bones perform this function with the help of the

- A. muscles
- B. kidney
- C. lungs
- D. heart

Answer:



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33. The muscular system helps the body in movement. In conducting the movements of the body, the muscular system is supported by the

A. skeletal system

B. digestive system

C. excretory system

D. circulatory system



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34. Muscles help in the movement of bones. Which of the following statements about muscles is correct?

- A. They contract to become short and thick to push the bone.
- B. They relax to become long and thin to push the bone.

C. They work independently to move a bone.

D. They work in pairs to move a bone.

Answer:



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35. In which of the following plants, movement by cilia is observed?

A. Moss

- B. fern
- C. Chlamydomonas
- D. Volvox



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36. The movement of plants towards light is called

A. phototrophism

- B. geotropism
- C. hydrotropism
- D. Thigmotropism



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37. Statement - I: Roots are positively geotropic.

Statement -II, Show are negatively geotropic.

- A. Statement -I is true, Statement II is false
 - B. Statement I is false, Statement II is true.
 - C. Both statements are true.
- D. Both statements are false.



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38. Roots are usually

- A. positively geotropic
- B. negative phototropic
- C. positively hydrotropic
- D. All



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39. Which of the following statements is correct about growth independent movements?

- A. This type of movement is apparent.
- B. This type of movement is dependent on phytohormones.
- C. This type of movement is shown by tendrils of the pea plant.
- D. This type of movement is independent of the direction of stimulus.



- 1. Cilia are used for locomotion in case of
 - A. Amoeba
 - B. Euglena
 - C. Paramecium
 - D. Hydra



2. Earthworm moves by means of

- A. Flagella
- B. Circular and longitudinal muscles
- C. Fins
- D. Hind limbs

Answer:



| 3. | Muscles | are | attached | to | the | bones | by |
|----|---------|-----|----------|----|-----|-------|----|
|----|---------|-----|----------|----|-----|-------|----|

- A. Tendons
- **B.** Cartilages
- C. Ligaments
- D. None of the above



- 4. Synovial cavity is found in
 - A. Immovable joints
 - B. Freely movable joints
 - C. Slightly movable joints
 - D. Muscles



5. The joint which allows movement in one direction only is a

A. Hinge joint

B. Pivot joint

C. Ball and socket joint

D. Slightly movable joint

Answer:



| 6. In tropic movement, p | lant parts | move |
|--------------------------|------------|------|
|--------------------------|------------|------|

- A. Away from the stimulus
- B. Towards the stimulus
- C. Either towards or away from the stimulus
- D. Only towards soil



Summative Worksheet Fill In The Blanks

1. A joint occurs where two meet.



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2. When a muscle ____original shape.



3. Joints in the bones of the skull are of type.



4. In a positive response, the movement is the stimulus.



5. Mavement in response to touch is called



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Summative Worksheet

1. Name the structure associated with locmotion in the following organissm

Amoeba



2. Name the structure associated with locmotion in the following organissm

Paramecium



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3. Name the structure associated with locmotion in the following organissm

Euglena



4. Name the structure associated with locmotion in the following organissm

Hydra



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5. Name the structure associated with locmotion in the following organissm

Fish



6. Name the structure associated with locmotion in the following organissm

Reptiles



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7. Name the structure associated with locmotion in the following organissm

Birds



8. Name the structure associated with locmotion in the following organissm

Frog



9. Define the following

Joints



10. Define the following

Tendons



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11. Define the following

Tropism



12. Define the following

Phototropism



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13. Define the following

Thigmotropism



14. Name the joints found in / between

Teeth and gum



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15. Name the joints found in / between

Finger



16. Name the joints found in / between Skull



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17. Name the joints found in / between

Knee



18. Name the joints found in / between Shoulder



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19. Differentiate between the following

Tendons and ligaments.



20. Differentiate between the following

Hydrotropism arid thigmotropismi



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21. Differentiate between the following

Hinge joint and ball and socket joint



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Summative Worksheet Answer The Following

1. Why do animals need locomotion?



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2. How is locomotion brought about in humans?



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3. Give a brief account of the various methods of locomotion in animals.



4. How is locomotion different from movement?



5. In which animals, do you find the following structures:

Webbed feet



6. In which animals, do you find the following structures:

Pseudopodia



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7. In which animals, do you find the following structures:

Tentacles



8. How does locomotion take place in an earthworm?



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9. What is tropism?



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10. What is meant by positive and fegative responses.



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11. How are tropic movements differerit from rastic movements?



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12. Write in brief, about thie different types of tropic movements.



13. Name the stisnulus which causes the following movements in plants: geotropismi, opening and closing of flowers, phototropism, thigmotropism, hydrotropism

