

Class : IX

BIOLOGY

Time : 1½ Hours
Score : 40**Instructions**

- The first 15 minutes are cool-off time.
- This time can be used for reading the questions and planning the answers
- Write answers only according to the instructions and questions.
- While writing the answers, consider the score and time.
- Question numbers 10, 13, 15, 17 and 18 are given choices.

Answer questions 1 to 4. 1 score each.**(4x1=4)**

1. Which are the pores in the plant stem that facilitate gaseous exchange? (1)
 a) Lenticels b) Vessels c) Hydathodes d) Tracheids
2. Select the correct option by matching the information in the table. (1)

First aid equipment	Situation of use
p) Bandage	x) In case of injury to parts like arms, shoulders, etc.
q) Splint	y) In situations where fracture or dislocation occurs.
r) Sling	z) For wounds, swelling, and bleeding.

- a) p-x, q-y, r-z b) p-z, q-x, r-y
 c) p-z, q-y, r-x d) p-y, q-z, r-x
3. Analyse the Assertion (A) and Reason (R) and choose the correct option. (1)

Assertion (A) : Starfish belongs to the phylum Echinodermata.**Reason (R)** : It is a marine organism with a spiny body.

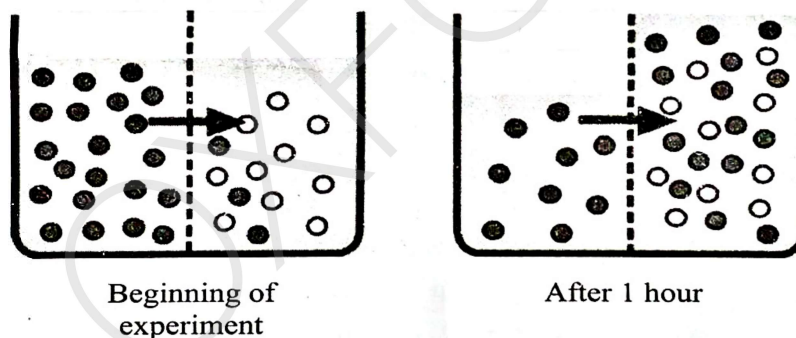
- a) A is correct, R is incorrect.
 b) A is incorrect, R is correct.
 c) Both A and R are correct; R is the correct explanation of A.
 d) Both A and R are correct; R is not the correct explanation of A.

4. Various stages related to the growth of the foetus are given below. Select the option that indicates the correct sequence. (1)
- i) Organ formation
 - ii) Fertilization
 - iii) Implantation
 - iv) Zygote formation
- a) i → ii → iii → iv b) ii → iv → iii → i
- c) iv → ii → iii → i d) ii → iii → iv → i

Answer questions 5 to 11. 2 scores each.

(7x2=14)

5. Answer the following questions based on the Six-Kingdom classification:
- a) Which are the new kingdoms formed by dividing Kingdom Monera? (1)
- b) What was the reason for dividing the organisms in Monera into two separate kingdoms? (1)
6. An experiment is illustrated where fresh water and salt water are separated by a semipermeable membrane in a beaker. Observe it and answer the questions.



Hint :

● Water molecule ○ Salt molecule ----- Semi-permeable membrane

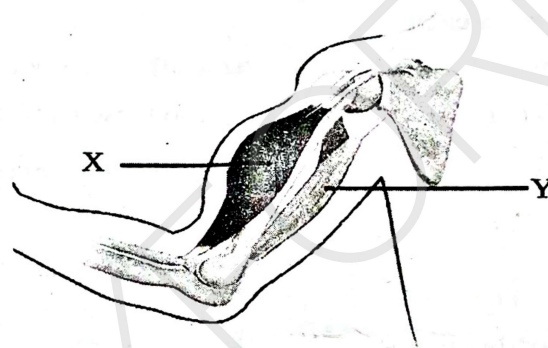
- a) Which process is indicated in the illustration? (1)
- b) Is the entry of oxygen into cells also occurring through this same process? Why? (1)
7. "The caring attitude of the family and society towards pregnant women beneficially affects the health of both the mother and the child."
Do you agree with this statement? Why? (2)

8. Analyse the child's doubt and provide the correct explanation.

(2)



9. Analyse the diagram regarding the folding movement of the arm and answer the questions.



- a) Name the muscles 'X' and 'Y'. (1)
- b) Write the change occurring in each muscle during this action. (1)

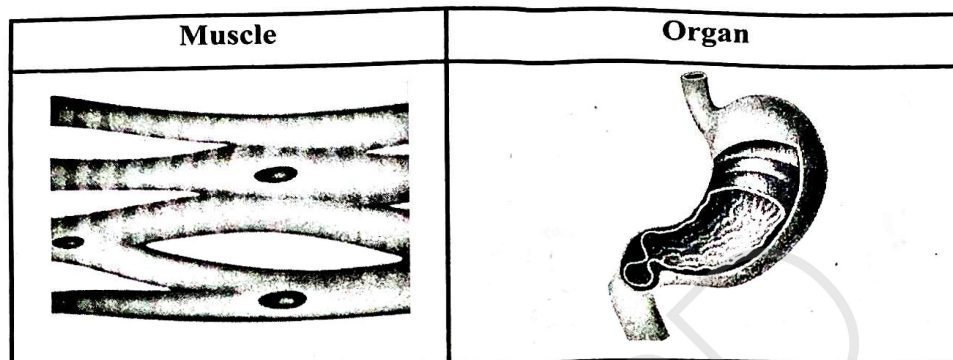
10. A. Certain hints regarding digestive juices are given below. Analyse them and answer the questions.

Digestive Juice	Hints
P	Contains Hydrochloric acid
Q	Contains the enzyme Salivary amylase
R	No enzymes are present

- a) Identify and name the digestive juices 'P' and 'Q'. (1)
- b) Write the function of digestive juice 'R' in digestion. (1)

OR

- B. Compare the process of nutrition occurring in Hydra and Amoeba based on the following indicators.
- a) Means of ingestion (1)
- b) Process of digestion (1)
11. A child paired a muscle with the organ where it is found as given below. Name the muscle and find out whether this pair is correct and explain why. (2)



Answer questions 12 to 17. 3 scores each.

(6x3=18)

12. "The use of drugs, smoking and alcoholism adversely affect reproductive health." Write the ill effects caused to reproductive health due to these bad habits. (3)

13. A. Hints regarding certain divisions in the classification of plants are given below. Analyse them and answer the questions.

Hints:

X- Xylem vessels and tracheids are present.

Y- Reproductive parts called cones are present.

- a) Identify the divisions 'X' and 'Y'. (1)
- b) Write examples for plants included in each division. (1)
- c) Write two other characteristics of division 'X'. (1)

OR

- B. Analyse the table and answer the questions.

Organism	Vertebral Column	Forelimbs	Hair	Lactation
Human	Present	Present	Present	Present
Lungfish	Present	Absent	Absent	Absent
Dog	Present	Present	Present	Present
Lizard	Present	Present	Absent	Absent

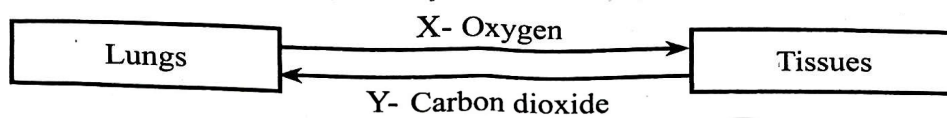
- a) Write one similarity between Lungfish and Humans. (1)
- b) Write the differences between Dog and Lizard. (1)
- c) While constructing an evolutionary tree using this data, which organism comes first? Why? (1)

14. Analyse the situation given below and answer the questions.

"During puberty, there is a higher chance of getting infections in the genital areas. Special care is required to prevent this."

- a) What is the factor that leads to fungal infections in these areas? (1)
- b) What should be kept in mind about clothing to prevent such infections? (2)

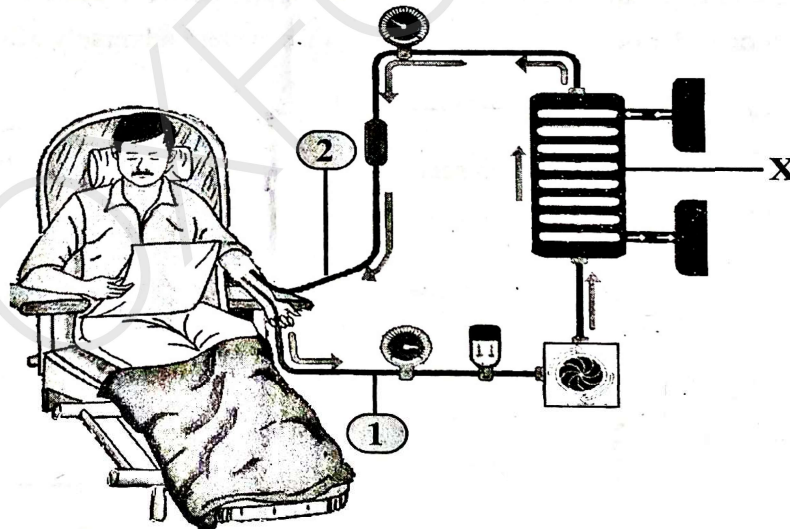
15. A. Observe the illustration and answer the questions.



- a) In which stage of cellular respiration is 'X' utilized? (1)
- b) Write one method each for the transport of 'X' and 'Y'. (2)

OR

B. Analyse the illustration related to the treatment of kidney disease and answer the questions.



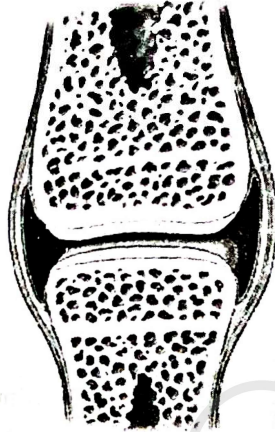
- a) Which process is indicated in the illustration? (1)
- b) Explain stages '1' and '2'. (1)
- c) Write the process taking place in 'X'. (1)

16. Analyse the given characteristics and answer the questions:

- Lacks cytoplasm, organelles, and nucleus.
- Genetic material is found inside an outer protein coat called a Capsid.

- a) Which group shows these characteristics? (1)
- b) Can this group be included in the Six-Kingdom classification? Why? (2)

17. A. Redraw the diagram and answer the questions.

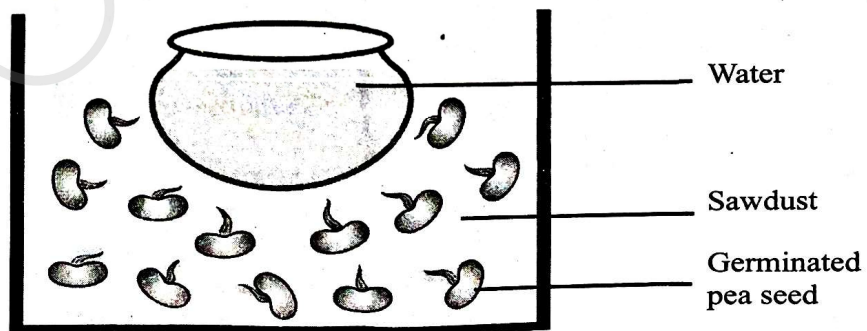


Redraw

- a) Name and label any one part that reduce friction between bones. (1)
- b) Which disorder occurs if the body's immune system adversely affects this part? (1)

OR

B. The changes observed in pea seeds in an experiment after a few days are illustrated. Observe this and answer.

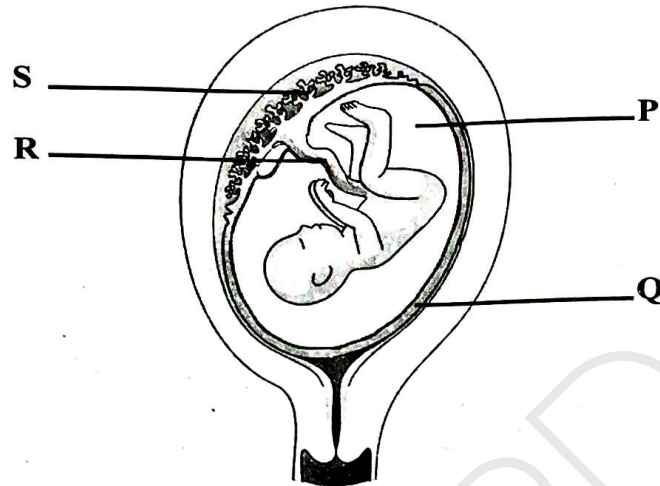


- a) Which plant movement is seen here? (1)
- b) Which stimulus caused this movement? (1)
- c) Write the inference obtained from this observation. (1)

Answer question 18. 4 scores.

(1x4=4)

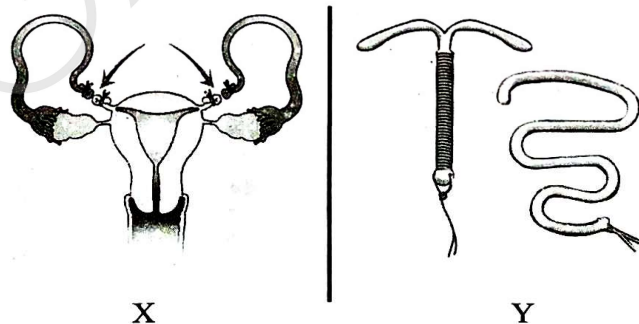
18. A. Observe the given diagram related to the nutrition and protection of the foetus and answer the questions.



- (a) Which letter indicates the temporary system formed by the embryonic and uterine tissues? What is the name of this part? (1)
- (b) Name the fluid indicated in the diagram and write its function. (1)
- (c) 'Even though the blood of the mother and the fetus do not mix directly, nutrient exchange is possible'. Do you agree with this statement? Why? (2)

OR

- B. Observe the images representing contraceptive methods and answer the questions.



- a) Name the contraceptive methods 'X' and 'Y'. (1)
- b) Classify them into temporary and permanent methods. (1)
- c) "Maintaining proper intervals between two births is essential for the health of both the mother and the child." Do you agree with this statement? Why? (2)