A

E 906 Bio

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SECOND TERMINAL EVALUATION - 2019-20

BIOLOGY

Std : IX

Time : 1½ Hours
Score : 40

Instructions

- The first 15 minutes is the cool off time. You may use this time to read the questions and plan your answers.
- Answer only on the basis of instructions and questions given.
- Consider score and time while answering

Answer any five from questions from 1 to 6. Each question carries 1 Score.

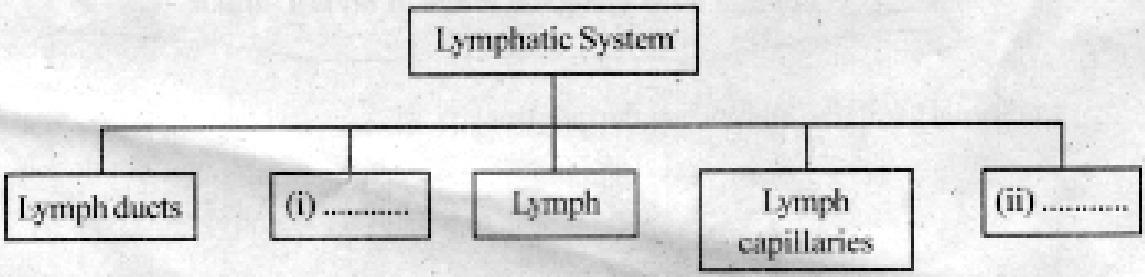
(5 X 1 = 5)

1. Analyse the given illustration and identify 'X'

A | Oxygen + haemoglobin → Oxyhaemoglobin

B | Carbon dioxide + haemoglobin → X

2. In which part of the kidney ultra filters are present?
   (a) Medulla
   (b) Pelvis
   (c) Cortex
   (d) Collecting duct
3. Correct errors if any in the underlined part
   (a) Gaseous exchange in leaves takes place through lenticels.
   (b) Gaseous exchange through lenticels is an example of active transport.
4. Complete the illustration



5. Choose the correct statement.
   - Hypotension is the increase in blood pressure above the normal rate.
   - Tidal volume is the volume of air we breathe in and out during normal breathing.
   - Pericardium is the membrane which covers lungs.
   - Diaphragm covers and protects heart.

6. Some diseases are given in the box. Identify the diseases which affect the given body parts.

Hepatitis, Nephritis, Diabetes, Bronchitis

(a) Kidney : .....

(b) Lungs : .....

Answer any 6 from questions 7 to 13. Each question carries 2 Score.

(6 × 2 = 12)

7. Analyse the illustration which indicates the process of photosynthesis and answer the questions.

Carbon dioxide + Water → Glucose + Oxygen

(a) Rearrange this as the illustration of cellular respiration.

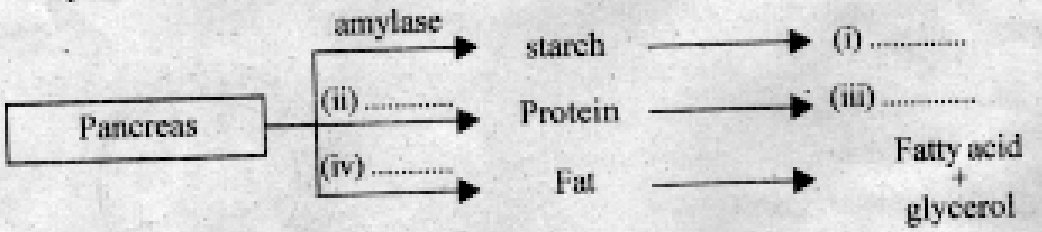
(b) How are these two processes related to energy?

8. Analyse the facts given below and give proper explanation for each of them

(a) Trachea always remains open.

(b) Gaseous exchange takes place in stem even if stomata are absent.

9. Complete the illustration suitably.

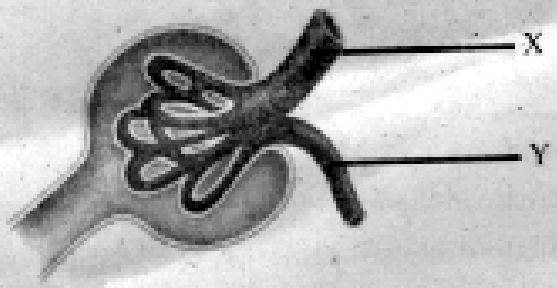


10. Write two concepts which can be included in a pamphlet related to kidney donation.

11. Analyse the given caption, related to the health of heart and write a short note.

Though adds taste, too much of fat is a villian

12. Observe the figure and answer the questions.



(a) Identify X and Y

(b) How do the difference in the diameter of X and Y help in ultra filtration?

13. Based on the processes given in the box answer the questions.

Simple diffusion, facilitated diffusion, active transport, osmosis

(a) Identify the process that is applicable only to water molecules?

(b) How does this process differ from other processes?

Answer any 5 questions from 14 to 20. Each question carries 3 scores.

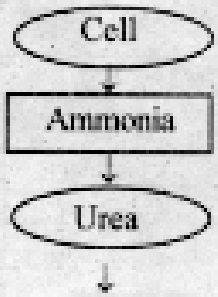
(5 × 3 = 15)

14. Classify the information related to the process of respiration given below and arrange them in a table under two proper headings.

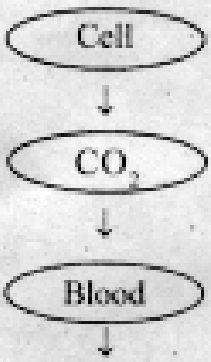
- Intercostal muscles contracts.
- Ribs lower.
- Diaphragm contracts.
- Volume of thoracic cavity decreases.

15. Illustrations related to two processes are given below. Analyse them and answer the questions.

Process - I



Process - II



(a) Name the life processes indicated as process I and II

(b) What is the need of converting ammonia into urea?

(c) How is process II related to process I?

16. Analyse the sentence from a science article given below and answer the questions.

'Toxins in tobacco destroy alveoli.'

(a) Which is the disease indicated in the science article?

(b) How does it affect alveoli?

(c) Write two other lung diseases caused by smoking.

17. Analyse the statement and answer the questions given below.

'Many components in the glomerular filtrate are reabsorbed to blood'

(a) Which are the components reabsorbed completely to blood?

(b) In which part of the nephron does this process take place?

(c) What is the importance of substances which are reabsorbed partially?

18. 'The process of conversion of pyruvic acid to water and carbon dioxide takes place in mitochondria'

(a) Which process is mentioned above?

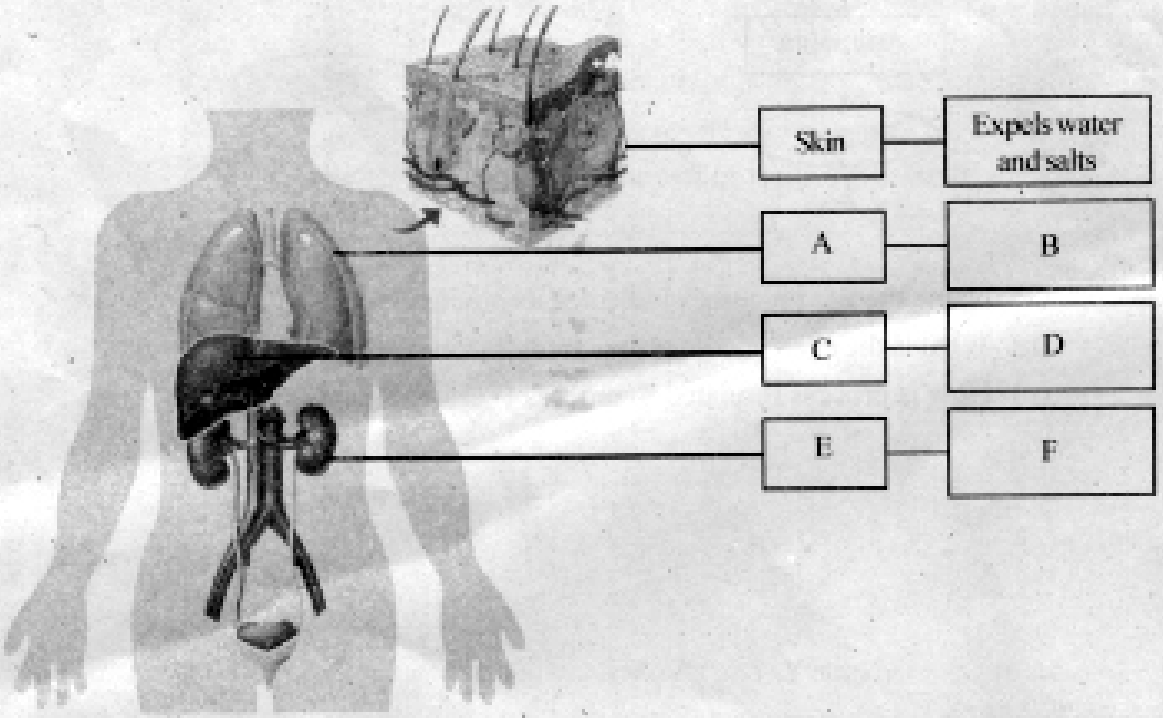
(b) In which cellular part does the formation of pyruvic acid take place?

(c) Carbon dioxide and water are expelled from the body. But what happens to the energy liberated in mitochondria?

19. The elimination of carbon dioxide from the cell takes place only through haemoglobin. Do you agree with this statement? Why?

20. Complete the illustration suitably by choosing the information given in the box

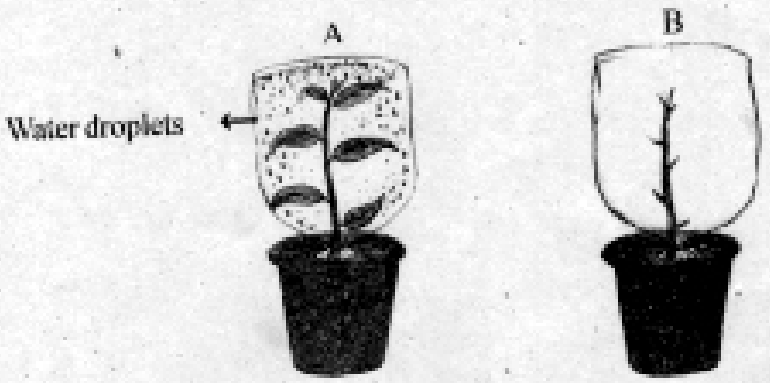
Lungs, skin, expels water and salts, synthesis of urea, liver, expels carbon dioxide, expels urea and water, kidney.



Answer any 2 from questions 21 to 23. Each question carries 4 scores.

(2 × 4 = 8)

21. Observe the figure and answer the questions.

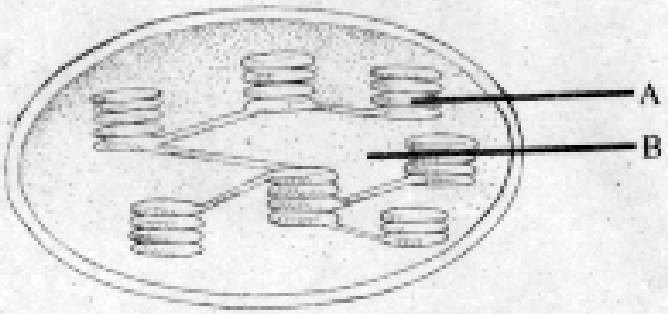


(a) Which process is responsible for the formation of water droplets in figure A?

(b) How does this process help in the transport of water up to the topmost branch of the tree?

(c) Name the other processes which help in the smooth upward movement of water through stem.

22. Redraw the diagram and answer the questions given below.



(a) Identify the parts labelled as A and B.

(b) Which phase of photosynthesis takes place in A?

(c) What are the products formed due to the chemical reactions that take place in A and B?

23. Artificial kidney is used to purify blood and retain life when both the kidneys are damaged.

(a) Name the process mentioned in the above statement.

(b) Write the steps involved in this process