

BOARD OF SECONDARY EDUCATION (TELANGANA)
SUMMATIVE ASSESSMENT – I
TENTH CLASS BIOLOGY MODEL PAPER
PAPER – II (ENGLISH VERSION)

Time: 2 hrs. 45 mins.

PART – A & B

Max. Marks: 40

Instructions:

- i) In the time duration of 2 hours 45 minutes, 15 minutes of time allotted to read and understand the question paper.
- ii) Answer the questions under PART – A in separate Answer book.
- iii) Write the answers to the questions under PART – B on the question Paper itself and attach it to the Answer book of PART – A.

Time: 2 hrs. 15 mins.

PART – A

Marks: 35

Instructions:

- i) PART – A comprises of three Sections I, II, III.
- ii) All the questions are compulsory.
- iii) There is no overall choice. However, there is an internal choice to the questions under Section – III.

SECTION – I

Instructions:

- i) Answer ALL the questions.
 - ii) Each question carries ONE Mark.
 - iii) Write the answers in 1 – 2 sentences. $7 \times 1 = 7$
1. If we keep on increasing CO₂ concentration in the air what will be the rate of photosynthesis?
 2. Raju said "stems also respire along with leaves in plants". Can you support this statement? Give your reasons.
 3. Do plants having reddish or yellowish leaves also carry out photosynthesis?
 4. There are valves between the arteries and veins. Do you think the benefit of these valves and the valves present in veins is same? Give your reason.
 5. What happens if both kidneys fail completely?
 6. You may have seen tendrils of plants growing towards a support, why do you think this happens? Would you say it is responding to a stimulus?
 7. Suggest two measures to recycle water in your locality or colony.

SECTION – II

Instructions:

- i) Answer ALL the questions.
 - ii) Each question carries TWO Marks.
 - iii) Answer the questions in 4 – 5 sentences. 6 × 2 = 12
8. Satish went on a trekking camp with his college team. He carried an Oxygen cylinder on his back. When he reached high altitude, he faced problem with the supply of Oxygen through the cylinder due to some technical problem. He suffered a lot and felt suffocation. Can you explain why this happened?
9. Observe the figure given below:



Lymphatic system

Answer the following questions:

- a) What is lymphatic system?
 - b) What are the functions of lymphatic system?
10. Karuna's uncle was admitted in hospital with a kidney problem. When Karuna went to see him, she saw that her uncle was undergoing a process that was filtering wastes in his kidney. If you were Karuna, what questions would you ask the doctor about this process?
11. Why is Adrenaline hormone called as fight and flight hormone? Give your reasons as per your understanding.
12. Prepare 4 slogans or a poster on the benefits of solar energy.

13.

Gas	% in inhaled air	% in exhaled air
Oxygen	21	16
Carbon dioxide	0.04	4
Nitrogen	79	79

Approximate values are given in the table.

Q: Why does the amount of Oxygen vary between exhaled and inhaled air?

Q: What has raised the percentage of Carbon dioxide in exhaled air?

SECTION – III

Note:

- i) Answer ALL questions.
- ii) Each question carries FOUR Marks.
- ii) There is Internal Choice for each question, only one option from each question is to be attempted.
- iv) Answer each question in 8 – 10 sentences. 4 × 4 = 16

14. What are the factors necessary for the process of photosynthesis? Write the details and your analysis on how they help in photosynthesis in a tabular form.

(OR)

Write the differences between arteries, veins and capillaries.

15. Rajesh concluded from the experiment conducted in his school that Carbondioxide is released during anaerobic respiration.

He recorded the details of the experiment in his lab record. Can you identify the experiment and write it?

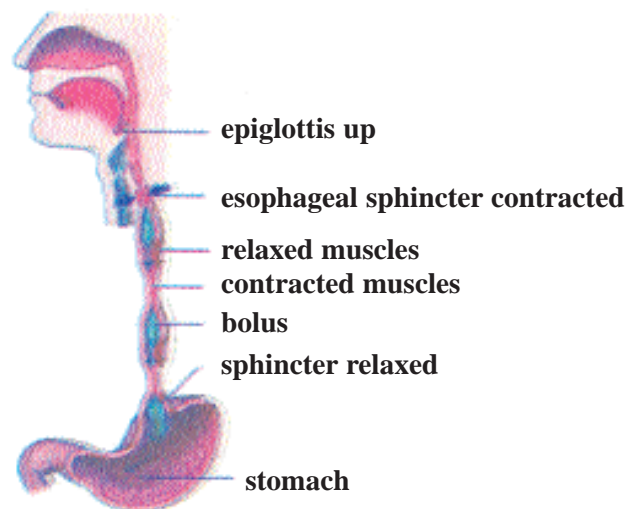
(OR)

Saleem observed the experiment demonstrated by his teacher in his Biology class. He saw that the teacher used a plant to demonstrate the uplift of water from the soil into the plants. He recorded his observations and inferences in his lab record. Can you identify the experiment he has observed? Write it.

16. Draw a flow chart of events/steps in Respiration.

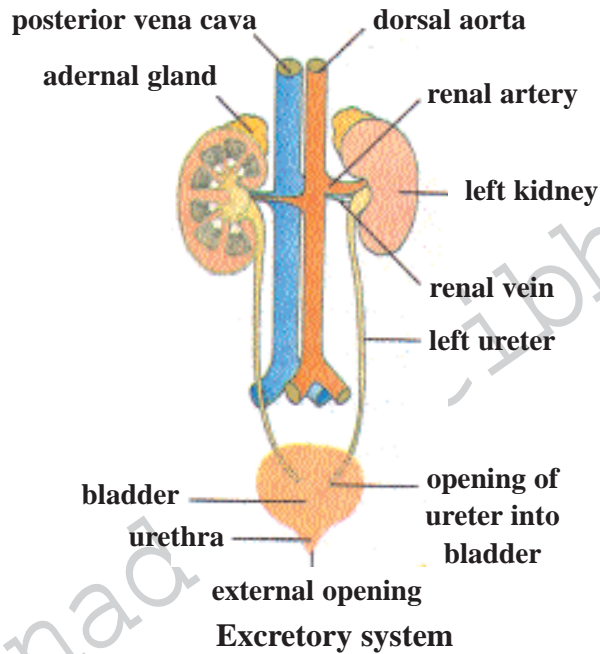
(OR)

See the picture below and explain in detail about it.



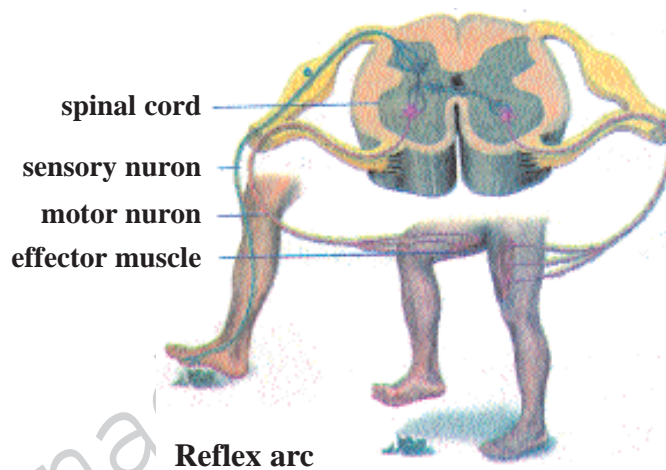
Peristaltic movement of bolus

17. Visit a urologist. Collect information about the diagram given below. Then, write the names of each part and its function in a tabular form.



(OR)

If you accidentally touched a very sharp surface with a finger, several such arcs would operate to cause the muscles of the arm to withdraw the finger. Observe the figure, how our leg-muscle responds when will step on a sharp edged object. Observe the figure given below.



Now, Think of any action and try to make a sketch of the reflex arc. And explain the reaction.

Instructions:

- i) Answer All the questions.
- ii) Each question carries $\frac{1}{2}$ Mark.
- iii) Answers are to be written in question paper only.
- iv) Marks will not be awarded in any case of any over writing and rewriting or erased answers.
- v) Write the CAPITAL LETTER showing the correct answer for the following questions in the brackets provided against them.

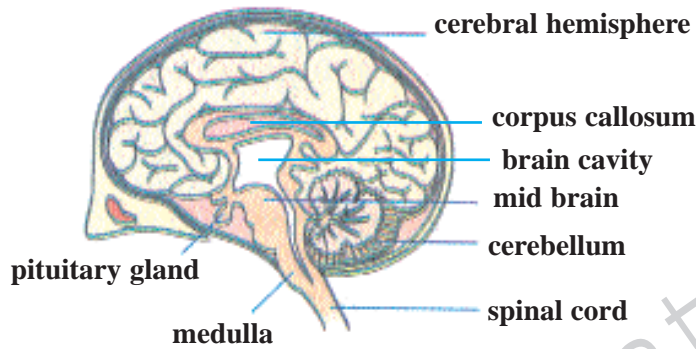
$$10 \times \frac{1}{2} = 5$$

SECTION – IV

18. Respiration is a catabolic process because of ()
A) breakdown of complex food molecules
B) conversion of light energy
C) synthesis of chemical energy
D) energy storage
19. Sequence of urine formation in nephron is ()
A) glomerular filtration, tubular reabsorption, tubular secretion
B) tubular reabsorption, tubular secretion, glomerular filtration
C) tubular secretion, glomerular filtration, tubular reabsorption
D) tubular reabsorption, concentration of urine, tubular secretion
20. Leaf movement in Mimosa helps to ()
A) reduce photosynthesis
B) protect from grazers
C) releasing phyto hormones
D) regulate it's growth
21. An aphid pierces its proboscis into the to get plant juices ()
A) xylem
B) phloem
C) cambium
D) vascular bundle
22. The term "dark reaction" in photosynthesis means ()
A) the reactions occur only when there is darkness
B) the reactions occur only when there is light
C) the reactions does not depend on light
D) the reactions depend on light
23. The term refers to the pathway by which cells release energy from the chemical bonds of food molecules that enter them and provide that energy for the essential processes of life. ()
A) cellular respiration
B) nuclear respiration
C) anaerobic respiration
D) metabolic activity

24. Arthropods, many molluscs and lower chordates possess this type of circulatory system ()
A) open type of circulatory system. B) closed type of circulatory system.
C) cardiac cycle system. D) purified circulatory system.

25. ()



Brain

Which part of the brain

- i) Maintains posture, equilibrium and muscle tone.
ii) Coordinates voluntary movements initiated by cerebrum.

- A) Cerebrum B) Diencephalon C) Medulla oblongata D) Cerebellum

26. What is this? ()



- A) oven B) solar cooker C) electric cooker D) gas stove

27. Can you identify this environmental movement? ()



- A) Chipko movement B) Save Ganga movement
C) Narmada bachao movement D) Ozone movement

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