

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. Try to name some parts where parts where you think photosynthesis occurs.
 2. How would you appreciate the alveoli?
 3. What are the three main types of blood vessels in the body?
 4. How are waste products excreted in Amoeba?
 5. Plants respond to stimulus. Give one example.
 6. What are Heterotrophs? How do they obtain food?
 7. How does the excess presence of greenhouse gases harm the atmosphere?

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. Observe the picture given below.



What is this experiment?

Into which colour shall the leaf change?

Label the parts of the diagram.

9. These are aerial roots.



- i) How do plants take in air?
 - ii) How do plants rooted in marsh or wet lands take in air?
 - iii) Is aeration of roots necessary? Why?
10. If the valves in veins of the legs fail to stop flow of the blood, what could be the consequences of this failure?
11. Deepak said that "Nephrons are functional units of kidneys". How will you support him?
12. You are walking in the traffic suddenly you heard a loud sound. How coordination takes place in this situation among respected organs? Draw a block diagram to explain this situation.
13. These days we see so many people who get affected by Dengue fever and Malaria. Write few slogans about the prevention of these diseases and write the symptoms of Dengue fever and Malaria.

SECTION – III

Instructions: 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. Observe the figure given below.



What is the name of this experiment?

Write the process of experiment and explain what can be known from doing this experiment?

(OR)

Why do some people need to use a dialysis machine? Explain the principle involved in.

15. It has been found that all movements of breathing stop at once when the nerves leading from the brain to the respiratory muscles are cut.

Now answer the following questions:

- ★ What can be concluded from this?
- ★ What happens during the process of breathing?
- ★ Which gas needs to be removed from our body during exhalation?
- ★ Where does the extra amount of gas come from?
- ★ What is the composition of inhaled air?
- ★ When compare with inhaled air is there any difference in composition of exhaled air?

(OR)

Prepare a block diagram showing from water absorption by roots to transpiration by leaf and explain the process through description or a flow chart.

16. How can you prove that the water transport through the xylem?

(OR)

Distinguish between

- a) Stimulus and Response
- b) Afferent and Efferent nerves
- c) Central nervous system and peripheral nervous system
- d) Receptor and effector

17. Why do some people need to use a dialysis machine?

Explain the principle involved in it. Write about the process of dialysis the way you understood it.

(OR)

Give reasons

- a) Why photosynthesis is considered as the basic energy source for most of living world?
- b) Why is it better to call the dark phase of photosynthesis as a light independent phase?
- c) Why is it necessary to debranch a plant before performing any experiment on photosynthesis?
- d) Why is it not possible to demonstrate respiration in green plant kept in sunlight?

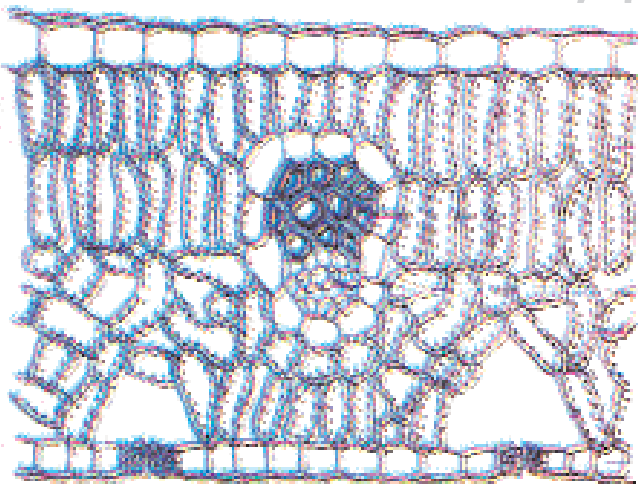
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Instructions:

- 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. Identify the diagram ()



- A) transverse section of leaf B) mitochondria
 - C) transverse section of stem D) transverse section of root
19. The thylakoid membranes present in the chloroplasts of the leaf contain two main types of pigments. One is chlorophyll – A and second is chlorophyll B. The colour of these pigments are ()
- A) chlorophyll A – bluish yellow; chlorophyll B – yellowish blue
 - B) chlorophyll A – green; chlorophyll B – yellow
 - C) chlorophyll A – bluish green; chlorophyll B – yellowish green
 - D) chlorophyll A – red; chlorophyll B – white
20. is a stiff box like structure containing our vocal cords. When air passes out of the lungs and over the vocal cords, it causes them to vibrate. This produces sounds on the basis of our speech, song etc. ()
- A) tongue B) vocal nerve C) Larynx D) Breath
21. $(\text{CH}_2\text{O})_n + \text{O}_2 \longrightarrow \text{CO}_2 + \text{H}_2\text{O} + \text{Energy}$ ()
- The equation above summarises which process?
- A) Respiration B) Photosynthesis
 - C) Excretion D) Blood circulation

22. Blood on which side of the human heart is low in oxygen? ()
A) left ventricle B) right ventricle
C) left atrium D) right atrium

23. He is an Englishman and a doctor. He dissected the hearts of dead people and studied the valves of their hearts. Who is he? ()



- A) Marcello Malpighi B) Robert Hooke
C) William Harvey D) Darwin
24. Which of the following hormone has direct impact on urination? ()
A) adrenal B) vasopressin C) FSH D) estrogen
25. Where is thyroid gland situated? ()
A) head B) neck
C) scrotal sac D) lower abdomen
26. Diabetes is related to this gland. ()
A) thyroid B) pancreas C) adrenal D) pituitary
27. Which state stands in first place in our country in utilizing solar energy? ()
A) Bihar B) Gujarat C) Karnataka D) Telangana

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