SAMAGRA SHIKSHA, KERALA
ANNUAL EVALUATION 2021-22
BIOLOGY

E906-Bio

Standard: IX

Time : $1\frac{1}{2}$ Hrs.
Total Score: 40

Instructions:

1. First 15 minutes is cool off time. This time is to be used for reading and understanding the questions.
2. Read the instructions carefully before writing the answers.
3. While writing the answers, score and time should be considered.

Answer any 5 from questions 1 to 7. Each question carries 1 score. **(1 × 5 = 5)**

1. Which of the following pigments directly participates in photosynthesis? (1)

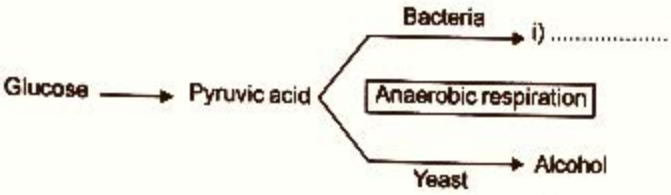
   a) Chlorophyll b b) Xanthophyll
   c) Chlorophyll a d) Carotene

2. Identify the process indicated in the given diagram. (1)

3. Name the blood vessel based on the characteristics given below. (1)

- Carries oxygen rich blood to the heart.
- Valves are seen inside.

4. Observe the illustration and complete it suitably. (1)



5. Select the correct statement from the list below. (1)

a) Pigments involved in photosynthesis are found in stroma.

b) The light phase takes place in grana.

c) ATP is formed during the dark phase.

6. Observe the illustration related to the axial skeleton and select the correct pair. (1)

7. Which of the following statements is related to cell division in animal cells? (1)

a) The plasma membrane invaginates at the centre of the cell.

b) Small vesicles are formed between the daughter nuclei.

c) The cell plate extends to both sides of the cell.

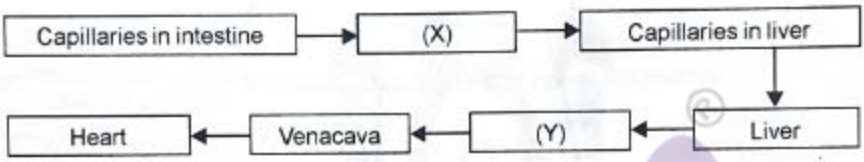
Answer any 6 from questions 8 to 17. Each question carries 2 score. (2 × 6 = 12)

8. Rearrange column B in accordance with column A. (2)

(A) Stages of Nuclear division	(B) Characteristics
Prophase	Chromosomes are arranged in the centre of the cell.
Metaphase	Chromosome number reduced to half.
Anaphase	Daughter nuclei are formed.
Telophase	Spindle fibres are formed.
	Daughter chromosomes are formed.

9. Write down any two features that make the Alveoli suitable for gas exchange. (2)

10. Analyse the flowchart related to the hepatic portal circulation and answer the given questions.



a) Identify 'X' and 'Y'. (1)

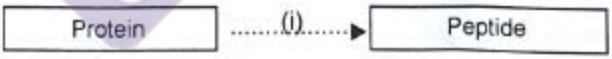
b) Write the peculiarity of 'X'. (1)

11. Complete the table given below by including the information in the box. (2)

- Volume of the thoracic cavity increases.
- Intercostal muscles relax.
- Diaphragm contracts.
- Pressure in the thoracic cavity increases.

Inspiration	Expiration
•	•
•	•

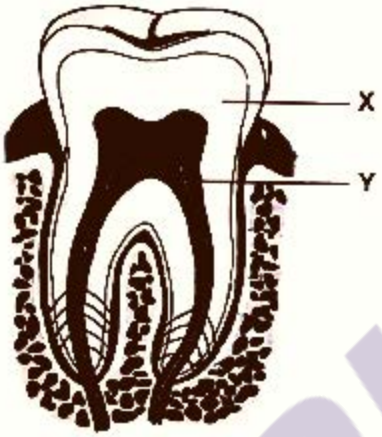
12. Analyse the illustration and answer the following questions.



a) Identify the enzyme indicated as 'i'. Which gland secretes this? (1)

c) Mention the role of this gland in the digestion of fat. (1)

13. Analyse the figure given below and answer the following questions.



a) Identify the parts labelled as 'X' and 'Y'. (1)

b) Write one peculiarity of each of them. (1)

14. The normal rate of human blood pressure is 120/80 mmHg.

a) What do the numbers 120 and 80 indicate? (1)

b) How does an uncontrolled increase in blood pressure affect health? (1)

15. Complete the illustration related to photosynthesis suitably. (2)

The phase in which Oxygen is released	→	(i).....
The source of Oxygen	→	(ii).....

16. In males, more than one sperm is produced from a single germinal cell. But in females only one ovum is produced. Write the reason. (2)

17. Complete the following illustration based on the given hints. (2)

Hints:

(i), (ii) - Stimuli

(iii), (iv) - Types of plant movements.

Climbers grow towards and around a support	**Pollen tube grows towards the ovary**
(i)	(ii) .....
(iii).....	(iv) .....

Answer any 5 from questions 18 to 24. Each question carries 3 score. (3 × 5 = 15)

18. Complete the following table related to the excretory process in different organisms suitably. (3)

Organism	Excretory organ	Excretory material
Amoeba	(i).....	(ii).....
Fish	(iii).....	Ammonia
Frog	Kidney	(iv).....
Earthworm	(v).....	(vi).....

19. Make corrections if any in the underlined portions of the following statements. (3)

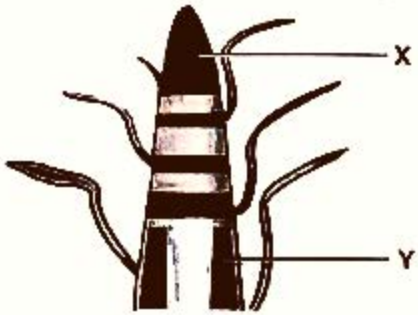
a) Glucose is converted into <u>fructose</u> and stored in oil seeds.

b) <u>Glucose</u> is transported to various parts of the plant body through phloem tubes.

c) Plants store glucose in the form of <u>starch</u> in the leaves.

d) Glucose is converted into <u>protein</u> and stored in fruits.

20. Observe the figure given below and answer the questions.



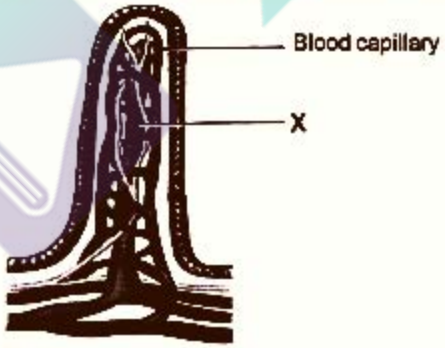
a) Which are the meristemic cells indicated as 'X' and 'Y'? (1)

b) How are their functions different? (2)

21. Complete the following table related to cellular respiration suitably. (3)

Indicator	Glycolysis	Kreb's Cycle
Location	(i).....	(ii).....
Need of Oxygen	(iii).....	(iv).....
Process	(v)..... is converted to Pyruvic acid	Pyruvic acid is converted to (vi).....

22. Observe the following figure and answer the questions.



a) Identify the figure. (1)

b) What is the part indicated as 'X'? (1)

c) Which are the nutrients absorbed through 'X'? (1)