

MODEL PAPER-3
S.S.C. PUBLIC EXAMINATIONS-2021
BIOLOGY
(English Medium)

Class: X

(Max.Marks: 50)

Time: 2 Hr. 45 Min

Instructions:

1. There are four sections an 33 questions in this papers.
2. Answer should be written in a given answer booklet
3. There is internal choice in Section-IV
4. Write all the questions visible and legibly.
5. 15 Minutes are given for reading the questions paper and 2.30 hours for given for answering questions.

SECTION-1

NOTE:1. Answer all the questions

2. Each question carries 1/2 mark

12 x 1/2 = 6 M

1. Read the sentence, find the error in the underlined words. Rewire it correctly.
 Government of India fixed the legal marriage age of boys 18 years and girls 21 years.
2. Find the mismatched one
 1. Testis - sperms
 2. Ovaries - Estrogen
 3. Chorion - Urethra

Fill the boxes in the table

Gas	% in inhaled air	% in exhaled air
3.?	2.1	16
4. ?	0.03	4.4

5. "You friend asked you to hold the scale near the end and let the other end be suspended between four fingers"
 Which concept was he trying to explain you?
6. Identify the excretory system in the following

Group-I <div style="border: 1px solid black; padding: 5px; display: inline-block;">Flame cells, Nephridia</div>	Group-II <div style="border: 1px solid black; padding: 5px; display: inline-block;">Pancreas, Oesophagus</div>
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7. Expan B.P.
8. $(CH_2)_n + O_2 \longrightarrow CO_2 + H_2O + Energy$
 What does this equation indicate?
9. Hydrilla plant is used to prove that oxygen is produced during photosynthesis. Name another plant which can be used in this experiment.
10. Pleura : Lungs :: Pericardium : ?

11. Which group indicates factors of photosynthesis?

Group-I

Oxygen, water,
Haemoglobin

Group-II

Chlorophyll, CO₂,
Sunlight

12. Observe the figure and write its name.

SECTION-II

NOTE:

1. Answer all the questions
4. Each question carries 1 Mark

8x1=8M

13. "An athlete completed 100 mts. race by holding his breath" Give reason.
14. Which phase is called biosynthetic phase? Why?
15. Why do subcutaneous blood vessels bulge on the side away from the heart when the hand is tied.
16. What happens if harmful products are not removed from our body everyday?
17. How do we know that we need food?
18. You have conducted an experiment to prove that HCl secreted in our stomach, does not hard walls of the stomach. Write the apparatus used in that experiment.
19. Write about the hind brain which controls the posture of the body.
20. What happens if CO₂ is not expelled during exhalation?

SECTION-III

NOTE: 1. Answer all the questions

2. Each question carries 2 Marks

8x2=16M

21. What would happen if cell sap of root hair cells contain high concentration of ions?
22. What is the advantage of difference in diameter of efferent arteriole and afferent arteriole?
23. How does synapse form? What are the functions of synapse?
24. Bacteria underwent fission and occupied half of the bucket within 3 minutes. How long will it take to occupy the entire bucket?
25. What is the difference between stimulus and response?
26. What questions do you ask a doctor to know about different birth control methods?
27. Write any four slogans on the prevention of HIV/ AIDS.
28. What steps should we take to increase the population of insects in our surrounding fields?

SECTION-IV

NOTE: 1. Answer all the questions

2. Each question carries 4 Marks

5x4=20M

29. Complete the table

S.No.	Name of gland	Enzyme it secretes	Function of enzyme
(i)		Ptyalin	
(ii)	Stomach		Breaking the proteins
(iii)	Liver		Emulsification of facts
(iv)		Trypsin	Digestion of proteins

(or)

Observe the table and answer the questions given below

New born (0-3 months)	Infants (3-6 months)	Infants (6-12 months)	Children (1-10 years)	Children over 10 years & adults including senior citizens	Well trained adults athletes
100-150	90-120	80-120	70-130	60-100	40-60

- a) In which age group rate of heart beat is more?
- b) In which age group rate of heart beat is less?
- c) Why is heart beat less in athletes?
- d) What are the reasons for more rate of heart beat differences between newly born and children??
30. Distinguish between Aerobic and Anaerobic respiration
(OR)
Write the differences between spermatozoan and Egg
31. What are the features you observed through the demonstration of kidney in the laboratory? Write the procedure you followed for dissecting the specimen of kidney
- i) Explain the procedure followed in the experiment to understand the action of Saliva on starch.
- ii) You want to prove to your juniors that saliva acts on carbohydrates to break them into macro molecules. Explain the procedure of experiment you conducted to convince your juniors.
32. Draw a neatly labeled diagram to explain plant fertilization
OR
Describe with diagram how micro villi are helpful in absorption of digested food in small intestine.
33. Write your opinion on evolutionary evidences of the following information.
In all the animals forelimbs are structurally similar but perform different functions according to the habitat in which they live.
- OR
- What is meant by bio-remediation ? Explain.