

Biology

Time : 2½ Hours]

PARTS - A & B

[Max. Marks : 50

Instructions :

1. Answer the questions under **Part – A** on a separate answer book.
2. 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 Hours]

PART - A

[Marks : 35

SECTION – I (Marks : 4 × 1 = 4)

- Note : 1) Answer ANY FOUR questions from the following
- 2) Each question carries ONE mark.
1. What is the function of Pericardial fluid ?
 2. How trachea is prevented from collapsing ?
 3. What is a Hormone ?
 4. What is Iodised salt ? Why is it advisable to take iodised salt ?
 5. What is Sexual Dimorphism ?
 6. How Tetanus germs are transferred into body ?

SECTION – II (Marks : 5 × 2 = 10)

- Note : 1) Answer ANY FIVE questions, choosing atleast TWO from each GROUP 'A & B'.
- 2) Each question carries TWO marks.

Group - A

7. What are the major types of White Blood Cells ?
8. How is sinus venosus formed in Amphibia ?
9. What is Action Potential ?
10. Write two advantages of Vegetative Propagation.

Group - B

11. Why the damage in certain disease like Polio is permanent ?
12. How do you differentiate between the animal and vegetal poles of the ovum of frog ?
13. Why do sports-persons take Glucose ?
14. Due to the deficiency of which nutrient, Kwashiorkor is caused ? Write about it.

SECTION – III (Marks : 4 × 4 = 16)

- Note : 1) Answer ANY FOUR questions, choosing atleast TWO from each GROUP 'A & B'.
- 2) Each question carries FOUR marks.

Group - A

15. Explain the evolution of heart in higher animals.

16. Write the differences between Photosynthesis and Respiration.
17. Describe the structure of Cerebrum of human brain.
18. What is the role of plant hormones in plants ?

Group - B

19. What are the different types of fractures seen in the limbs of a person ?
20. Why is the spread of HIV a burning issue today ?
21. Give an account of menstrual cycle in human beings.
22. Describe the parts of a flower.

SECTION – IV (Marks : 1 × 5 = 5)

- Note :**
- 1) Answer ANY ONE question.
 - 2) The question carries FIVE marks.

23. Draw a neat, labelled diagram of transverse section of Leaf.
24. Draw a neat, labelled diagram of Lungs in man.

Time : 30 Minutes]

PART - B

[Marks : 15

Note :

- 1) Answer all the questions.
- 2) Each question carries $\frac{1}{2}$ mark.
- 3) Candidates must use the Capital Letters while answering the multiple choice questions.
- 4) Marks will not be awarded in case of any over-writing or re-writing or erased answers.

I. Write the "CAPITAL LETTER" (A, B, C, D) choosing the correct answer in the bracket provided against each question.

(10 × $\frac{1}{2}$ = 5)

- | | |
|---|---|
| <ol style="list-style-type: none"> 1. In plants, exchange of gases takes place through ()
 A) Stomata B) Palisade tissue
 C) Spongy tissue D) Mid rib 2. Maximum rate of respiration takes place at ()
 A) 0°C B) 45°C
 C) 100°C D) 60°C 3. Trachea are found in ()
 A) Megascolex B) Bony fish
 C) Salamander D) Butterfly 4. Apical dominance means ()
 A) Terminal bud growing non stop
 B) Terminal bud suppressing growth of lateral buds
 C) Removal of the apex of the stem
 D) Terminal and lateral branches grow equally | <ol style="list-style-type: none"> 5. Conversion of Glycogen to Glucose is stimulated by ()
 A) Insulin B) Cortisol
 C) Glucagon D) Progesterone 6. Carpels are present in ()
 A) Androecium B) Pistil
 C) Ovules D) Seeds 7. Blood sinuses occur in ()
 A) Earthworm B) Frog
 C) Snail D) Insects 8. In stem cuttings, a slanting cut is made in the stem ()
 A) Below the node B) Above the node
 C) On the node D) Across the node 9. The rate of respiration per minute in a new born child is ()
 A) 18 times B) 32 times
 C) 26 times D) 16 times 10. The skill needed to take right decision is ()
 A) Observation skill
 B) Communication skill
 C) Critical thinking D) Negotiation skill |
|---|---|

II. Fill in the blanks with suitable words :

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

11. won Nobel Prize for his work on Photosynthesis.
12. In spermatozoan, the nucleus is present in
13. Endocrine glands discharge their secretions into
14. The fluid connective tissue of the body is

15. In Glossitis, the becomes red and glazed.
16. The heart that pumps blood to lungs is called heart.
17. Animal starch is known as
18. Buds in Bryophyllum are known as buds.
19. Paramoecium undergoes sexual reproduction by
20. The decade from 1990 to 2000 is known as

III. Match the following :

Group - A		Group - B ($5 \times \frac{1}{2} = 2\frac{1}{2}$)	
21. Respiratory substrates	()	(A) 3 ATP molecules	
22. Cristae	()	(B) 2 ATP molecules	
23. Matrix	()	(C) Citric acid cycle	
24. Sir Hans Krebs	()	(D) Mitochondria	
25. $FADH_2$	()	(E) Elementary particles	
		(F) Carbohydrates	
		(G) Glycolysis	

Group - A		Group - B ($5 \times \frac{1}{2} = 2\frac{1}{2}$)	
26. Beri-Beri	()	(A) Paramoecium	
27. Pellagra	()	(B) Spermatozoan	
28. Conjugation	()	(C) Frog	
29. Xerophthalmia	()	(D) Niacin	
30. Acrosome	()	(E) Megascoclex	
		(F) Thiamine	
		(G) Vitamin - A	