

**20E(A)**

**GENERAL SCIENCE, Paper – II**

**MARCH 2008**

**Parts A and B**

***[Maximum Marks: 50 Time: 2½ Hours]***

**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**.
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**PART – A**

**Time: 2 Hours**

**Marks: 35**

***(Marks 4x1=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: 5x2=10)***

**NOTE:**

1. Answer **ANY FIVE** questions, choosing **at least TWO** from each of the following two groups.
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 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 4x4=16)

**Note:**

1. Answer **ANY FOUR** questions, choosing at least **TWO** from each group.
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 1x5=5)

**Note:**

1. Answer **ANY FOUR** questions, choosing at least **TWO** from each group.
2. Each question carries **FOUR** marks.

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

**20E(B)****PART – B****Time: 30 minutes****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, re-writing or erased answers.

**I. Pick out the correct answer and fill in the blanks with the CAPITAL LETTER of the correct answer chosen.**

**10 x  $\frac{1}{2}$  = 5**

1. In plants, exchange of gases take place through  
(A) Stomata (B) Palisade Tissue (C) Spongy tissue (D) Mid rib
2. Maximum rate of respiration takes place at  
(A)  $0^{\circ}\text{C}$  (B)  $45^{\circ}\text{C}$  (C)  $100^{\circ}\text{C}$  (D)  $60^{\circ}\text{C}$
3. Trachea are found in  
(A) Megasclolex (B) Bony fish (C) Salamander (D) Butterfly
4. Apical dominance means  
(A) Terminal bud growing nonstop (B) Terminal bud suppressing growth of lateral buds  
(C) Removal of the apex of the system (D) Terminal and lateral branches grow equally
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

**I. Fill in the blanks with suitable answers.**

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 .....
17. Animal starch is known as .....
18. Buds in Bryophyllum are known as ..... buds.
19. Paramecium undergoes sexual reproduction by .....
20. The decade from 1990 to 2000 is known as .....

**II. Match the following by writing the letter of the correct answer in the brackets, choosing from the Group – B.**

**(i) Group – A**

21. Respiratory substrates
22. Cristae
23. Matrix
24. Sir Hans Krebs
25.  $FADH_2$

**Group – B**

- (A) 3 ATP Molecules
- (B) 2 ATP Molecules
- (C) Citric Acid Cycle
- (D) Mitochondria
- (E) Elementary Particles
- (F) Carbohydrates
- (G) Glycolysis

**(ii) Group – A**

26. Beri-Beri
27. Pellagra
28. Conjugation
29. Xerophthalmia
30. Acrosome

**Group – B**

- (A) Paramecium
- (B) Spermatozoan
- (C) Frog
- (D) Niacin
- (E) Megascylex
- (F) Thiamine
- (G) Vitamin - A

\*\*\*\*\* END \*\*\*\*\*