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**SCIENCE ( Theory ) — Paper II**  
**( Botany and Zoology )**

Time Allowed :  $2\frac{1}{2}$  Hours ]

[ Maximum Marks : 100

**SECTION - A**

**BOTANY**

( Marks : 50 )

I. Choose and write the correct answer :

5 × 1 = 5

1. Vitamin  $B_2$  is manufactured by the action of

a) Clostridium

b) Bacillus

c) Nitrobacter

d) Pseudomonas.

2. The concept of two pigment systems was proposed by

a) Arnon

b) Hill

c) Emerson

d) Calvin.

3. The chromatids are joined at a particular point called

a) centromere

b) telomere

c) centriole

d) chromomere.

4. Excessive noise can lead to affect

a) lungs

b) ear

c) nose

d) muscles.

5. Seed is a fertilized

a) flower

b) ovary

c) androecium

d) ovule.

[ Turn over

II. Fill in the blanks with suitable terms :

5 × 1 = 5

6. Streptomycin is obtained from .....
7. The haploid set of chromosome is called .....
8. The pungent principle of ginger is .....
9. A special pattern of moist air movement is called .....
10. Crops cultivated for other than food are called ..... crops.

III. Answer any *five* of the following questions in *one* or *two* sentences each :

5 × 2 = 10

11. What is retting ?
12. What is root pressure ?
13. What is ATP ?
14. What is tropic movement ?
15. Mention the types of photosynthesis.
16. Define the term 'pomology'.
17. What is caryopsis ?
18. How is neem used traditionally ?
19. Define the term 'algal bloom'.
20. What are the types of agricultural practices in India ?

IV. Write short answers for any *four* of the following questions including Question No. 22, which is compulsory, each in 100 words. Draw diagrams wherever necessary.

4 × 5 = 20

21. Write a note on the harmful activities of bacteria.
22. Draw a schematic representation of dark reaction of photosynthesis.
23. Distinguish between DNA and RNA.
24. Write the significance of mutation.
25. Explain the zoochory with examples.
26. What are the effects of acid rain ?
27. Explain the rotation of crops.

V. Write a detailed answer for any *one* of the following questions in about 200 words. Draw diagrams wherever necessary.

1 × 10 = 10

28. Explain the physiological role of mineral elements.
29. Give an account of hypogeal germination.





VIII. Answer any *five* of the following questions in one or two sentences each :

5 × 2 = 10

40. What is peristaltic movement ?
41. Write the symptoms of Addison's disease.
42. Draw and label the structure of Lymph.
43. What is called Latebra ?
44. Define Ovulation.
45. Expand :
  - a) IUCN
  - b) ZSI.
46. What is Wild Life ?
47. What is meant by disease ?
48. Define Polydipsia.
49. Write any *two* characteristics of fresh water.

IX. Write short answers for any *four* of the following questions including Question No. 53, which is compulsory, in 100 words each. Draw diagrams wherever necessary.

4 × 5 = 20

50. Describe the pulmonary respiration in Frog.
51. Give an account of the photoreceptors of Frog.
52. Explain the structure of a tooth.
53. Draw a neat labelled sketch of a mammalian egg.
54. Enumerate the methods of restoring balance in Ecosystem. ( Any *five* points )
55. Write short notes on Coronary Heart disease.
56. Give an account of Dialysis.

X. Write detailed answer for any *one* of the following questions in 200 words. Draw diagrams wherever necessary.

1 × 10 = 10

57. Explain the structure and functions of the adenohipophysis of pituitary.
  58. Describe the steps involved in the process of cloning mammals.
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