



Bio-Botany

I. Choose The Correct Answer:

[3 x 1 = 3]

1. Restriction enzymes are
 - a) Not always required in genetic engineering
 - b) Essential tools in genetic engineering
 - c) Nucleases that cleave DNA at specific sites
 - d) both b and c
2. Virus free plants are developed from
 - a) Organ culture
 - b) Meristem culture
 - c) Protoplast culture
 - d) Cell suspension culture
3. Read the following statements and fill up the blanks with correct option.
 - i. Total soil water content in soil is called _____
 - ii. Soil water not available to plants is called _____
 - iii. Soil water available to plants is called _____

	(i)	(ii)	(iii)
(a)	Holard	Echard	Chresard
(b)	Echard	Holard	Chresard
(c)	Chresard	Echard	Holard
(d)	Holard	Chresard	Echard

II. Answer any 3 of the following questions:

[3 x 2 = 6]

4. What do you know about the word pBR332?
5. What is cryopreservation?
6. What are the differences between habitat and niche?
7. What are ecological equivalents? Give examples.

III. Answer any 2 of the following questions:

[2 x 3 = 6]

8. Write a short note on SCP.
9. What are the basic concepts of tissue culture?
10. Write a short not on thermal stratification.

IV. Answer any 2 of the following questions:

[2 x 5 = 10]

11. Give an account of methods of gene transfer.
12. Techniques involved in tissue culture technique.
13. Give an account of Biotic factors.

Bio-Zoology

I. Choose The Correct Answer:

[3 x 1 = 3]

1. Co-dominant blood group is
 - a) A
 - b) AB
 - c) B
 - d) O
2. The total number of nitrogenous bases in human genome is estimated to be about
 - a) 3.5 million
 - b) 35000
 - c) 35 million
 - d) 3.1 billion
3. Who published the book "Origin of species by Natural Selection" in 1859?
 - a) Charles Darwin
 - b) Lamarck
 - c) Weismann
 - d) Hugo de Vries

II. Answer any 3 of the following questions:

[3 x 2 = 6]

4. What are holandric genes?
5. State any three goals of the human genome project.
6. Name the anticodon required to recognize the following codons: AAU, CGA, UAU, and GCA.
7. List the major gases seems to be found in the primitive earth.

III. Answer any 2 of the following questions:

[2 x 3 = 6]

8. What is criss-cross inheritance?
9. What are the three structural differences between RNA and DNA?
10. Differentiate between divergent evolution and convergent evolution with one example for each.

IV. Answer any 2 of the following questions:

[2 x 5 = 10]

11. Explain the genetic basis of ABO blood grouping in man?
12. Why the human genome project is called a mega project?
13. Explain Darwin's theory and objections to Darwinism