

Total No. of Questions : 11]

[Total No. of Printed Pages : 3

12thRKDO18

20303-X

BOTANY

(Biology)

Time : 1½ Hours]

[Maximum Marks : 35

(Long Answer Type Questions)

5 each

1. What do you mean by semiconservative mode of replication ?
Explain the mechanism of same with suitable diagrams.

Or

State the principle of independent assortment. Explain the same with dihybrid cross.

2. What is primary productivity ?

- (i) Why does it vary in different ecosystems ?
(ii) State the relationship between gross and primary productivity.

Or

State the function of a reservoir in a nutrient cycle. Explain the simplified model of carbon cycle in nature.

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D-3-X

Turn Over

(Short Answer Type Questions)

3 each

3. How does pollen mother cell develop into mature pollen grain ?
Illustrate the stages with well labelled diagram
4. Define Apomixes. Explain its significance. How can it be commercially used ?
5. State the importance of Biofortification.
6. What do you mean by population interaction ? Differentiate between :
 - (i) Mutualism and Competition
 - (ii) Parasitism and Predation

(Very Short Answer Type Questions)

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7. What are the harmful effects of ozone depletion in stratosphere on living organisms ? <https://www.jkboseonline.com/>
8. What is the function of histones in DNA packaging ?
9. Reteroviruses do not follow central dogma. Comment.
10. What do you mean by anther culture ? Comment.

(Objective Type Questions)

1

11. (i) Define hot spot.
 - (ii) Organization responsible for maintaining red data book is :
 - (a) IUCN
 - (b) WWP
 - (c) CITES
 - (d) IBWL

(iii) Bt-toxin is :

- (a) Intracellular lipid
- (b) Intracellular crystalline protein
- (c) Extracellular crystalline protein
- (d) Glycoprotein

(iv) Which of the following is not biofertilizer ?

- (a) Nostoc
- (b) Mycorrhiza
- (c) Agrobacterium
- (d) Rhizobium

(v) In typical embryo the nuclei are arranged as :

- (a) 3 + 2 + 3
- (b) 3 + 3 + 2
- (c) 2 + 3 + 3
- (d) 2 + 4 + 2