

F-3-A

Roll No.

Total No. of Questions : 14+11]

[Total No. of Printed Pages : 8

XIIAPBIKD22

6903-A

BOTANY

(Biology)

(New/Old Course)

Time : 1½ Hours]

[Maximum Marks : 35

NOTE :— The questions in the question paper are based on revised and pre-revised syllabus marked as “New Course” and “Old Course” respectively and candidates are advised to appear in the relevant course meant for them. Candidates who may attempt the questions partly from “**New Course**” and partly from “**Old Course**” will not be awarded. Candidates are also advised to record “**New Course**” or “**Old Course**” as the case may be, on the front page of the answer-book.

XIIAPBIKD22—6903-A (New)

Turn Over

F-3-A

(New Course)

Section-A

1 each

1. In grafting the portion to be grafted on the main part is called :
(A) Adventitious bud
(B) Stem
(C) Stock
(D) Scion
2. Inside ovary, ovules develop from a special tissue called
(Fill in the blank)
3. Coat colour in rabbit is an example of Epistatic gene. (True/False)
4. Name the first National Park of India.

Section-B

2 each

5. How does vegetative propagation takes place in Potato ?
6. What are OKazaki Fragments ? Which enzyme joins them ?
7. What is Biogas ? Discuss its production in a Gobar Gas Plant.

Or

Write short note on Symbiotic Nitrogen Fixation.

Section-C

3 each

8. Write *three* characteristics of Genetic Code.
9. Write short notes on the following :
 - (A) *Ex-situ* conservation
 - (B) IUCN Red List
 - (C) Protected areas
10. What is a Flower ? Differentiate its organs as essential and non-essential floral organs.
11. A woman with blood group O married a man with AB group.
Show the possible blood groups of progeny. List the all alleles involved in this inheritance. <https://www.jkboseonline.com>
12. What do you mean by Plant Succession ? Describe the process of succession in a pond.

Or

What is Acid Rain ? What are its effects on plants ?

Section-D

5 each

13. Define Sewage. How is sewage subjected to various treatments in STP ?

Or

Discuss the various steps in breeding a new genetic plant variety.

14. Write a detailed note on agrochemicals and their effects on environment.

Or

What kinds of threats to the biodiversity may lead to its loss ?

(Old Course)

(Long Answer Type Questions)

5 each

1. Define Dehybrid Cross. How can it be used for explaining law of Independent Assortment ?

Or

Describe structure of DNA on the basis of Watson and Crick Model.

2. Define Ecological Pyramids. Describe briefly pyramids of number and biomass.

Or

Define Ecological Succession. Describe the process of ecological succession on a bare rock.

(Short Answer Type Questions)

3 each

3. Define Double Fertilisation. Describe the process in an angiospermic ovule.
4. Differentiate between DNA and RNA. (*three* points)
5. Define Tissue Culture. What are its applications ?
6. How will you differentiate between food chain and food web ? (*any three* points only)

(Very Short Answer Type Questions)

2 each

7. Define Parthenocarpy. Name *two* parthenocarpic fruits.
8. How biofertilizers are useful over chemical fertilizers ?
9. What are Biopatents ? Cite examples.
10. Define Hot-spots. Name two hot-spots located in India.

(Objective Type Questions)

1 each

11. (i) Ovule is attached to the wall of ovary by :
 - (A) Funicle
 - (B) Hilum
 - (C) Raphe
 - (D) Chalaza
- (ii) The type of pollination that brings genetically different types of pollen grains to the stigma of flower is :
 - (A) Xenogamy
 - (B) Geitonogamy
 - (C) Chasmogamy
 - (D) Autogamy

Turn Over

(iii) Define Heredity.

(iv) Define Autoecology.

(v) Synecology is defined as (complete definition).