

**2021**  
**Department of Botany**  
**Kaliachak College**  
**BOTANY (Honours)**  
**Paper Code: IV-A**  
**[New Syllabus]**

**Full marks: 14**

**Time: Twenty Minutes**

*Choose the correct answer.*  
*Each question carries 1 mark.*

1. In a food chain, the saprophytic organisms are
  - a) Producers
  - b) Consumers
  - c) Predators
  - d) Decomposers
  
2. The natural residence of every organism is known as:
  - a) Biome
  - b) Niche
  - c) Habit
  - d) Habitat
  
3. A wide variety of living organisms is called:
  - a) Biodiversity
  - b) Population
  - c) Habitat
  - d) Diversity
  
4. A mutual relationship between two organisms, where both of them are benefitting from each other is called:
  - a) Mutualism
  - b) Symbiosis
  - c) Parasitism
  - d) Food chain
  
5. The set of ecosystems is called \_\_\_\_\_.

- a) Atmosphere
- b) Hydrosphere
- c) Biosphere
- d) none of the above

6. The waxy substance associated with the wall of the cork cell is

- a) Lignin
- b) Hemicellulose
- c) Cutin
- d) Suberin

7. The apical meristem of the root is found in

- a) Taproots
- b) Radicals
- c) Adventitious roots
- d) All the roots

8. Which meristem helps in increasing the girth of the plant?

- a) Primary meristem
- b) Apical meristem
- c) Intercalary meristem
- d) Lateral meristem

9. Intercalary meristem results in

- a) Primary growth
- b) Secondary growth
- c) Apical growth

d) None

10. Microsporogenesis is the formation of :

a) Microspore

b) Megaspore

c) Egg

d) Embryo sac

11. Pollination by an insect is called:

a) Hydrophily

b) Entomophily

c) Anemophily

d) Ornithophily

12. The transfer of pollen grains from the anther to stigma is called;

a) Fertilization

b) pollination

c) Microsporogenesis

d) Polyembryony

13. Embryo sac of angiosperm is :

a) 6-celled 8-nucleate

b) 7-celled 8-nucleate

c) 8-celled 7-nucleate

d) 7-celled 7-nucleate

14. Occurrence of more than one embryo in a seed is known as:

a) Polyembryony

b) parthenocarpy

c) Apomixis

d) Embryogeny

**2021**  
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**Paper Code: IV-B**  
**[New Syllabus]**

**Full marks: 56**

**Time: Two Hours Forty Minutes**

*The figure in the margin indicate full marks*

**Group: A**

- 1. Write short answers of any *two* of the following :** 4x2=8
1. Explain Biotic Components and Abiotic Components of the Ecosystem with examples 4
  2. What is the Food Chain? Explain the different types of food chains in the ecosystem. 2+2
  3. Give the differences between Xylem and phloem. 4
  4. Describe the vegetation of Sunderbans? 4

**2. Answer any *two* questions from the following:** 10x2=20

1. Write a short note on the Nitrogen cycle with a flow chart. 10
2. Write a short note on hydrosere with diagram. 10
3. Describe different kinds of steles and their evolution. 10
4. Discuss the role of plant indicators in environmental monitoring. What are ecader? 8+2

**Group - B**

**1. Answer any *two* questions of the following :**

1. Explain the three ecological pyramids. What data is propagated by each pyramid in association with function, structure and energy in the ecosystem? 4x3=12  
4
2. Give the differences between sapwood and heartwood? 4

3. Define Ruminant endosperm and ecocline? 4
4. Discuss the types of stomata with supporting diagrams. 4
- 2. Answer any *two* questions from the following:** 10×2=20
1. what are autogenic and allogenic succession? Describe various types of xerosere? 4+6
2. what are the criteria for hotspots in India? describe insitu and ex situ conservation. Write a short note on cryopreservation? 2+4+4
3. Describe the development of different types of endosperm with suitable diagrams. 5+5
4. discuss the types and development of pits. 5+5