

2017

AGRICULTURE - PAPER-II

Time Allowed : 3 Hours

Full Marks : 200

If the questions attempted are in excess of the prescribed number, only the questions attempted first up to the prescribed number shall be valued and the remaining ones ignored.

Answers may be given either in English or in Bengali but all answers must be in one and the same language.

GROUP-A

Answer any three Questions.

1. a) Describe with a schematic representation of Ultra structure of a plant cell. 10+10
- b) What do you mean by Pinocytosis and Phagocytosis. 10
- c) Differentiate between Eukaryotic Cell and Prokaryotic Cell. 10
2. a) What is absorption spectrum and action spectrum. 5+5
- b) Distinguish between Cyclic Phosphorisation and non-Cyclic Phosphorisation. 10
- c) How solar energy is trapped by chloroplast. What is advantages of C_4 Cycle over C_3 Cycle. 10+10
3. a) What is the difference between aerobic and anaerobic respiration. 10
- b) What is respiratory quotient (RQ). What are the significance of RQ. 5+5
- c) Why Kreb's Cycle is called TCA Cycle. What is EMP path way. 10+10
4. a) State the role of synthetic Auxin in agriculture. 10
- b) What is growth₂ what are the phases of growth. 5+10
- c) State the role of K in plant nutrition. 10
- d) Why do plant need Mg. 5
5. a) Write the definition of plant seed. 5
- b) Give the structure and functions of the different parts of the plant seed. 15
- c) Write about quality seed and its role in Agriculture production. 20

P.T.O.

6. a) Describe the standard method of potato tuber cultivation in the gangetic West Bengal. 20
- b) Give the special emphasis on seed tuber rate/acre, variety, climatic condition, weed control and inter-cultural operation including irrigation in details. 20

GROUP-B

Answer any two Questions.

7. a) Write the variety of tube rose in the plain of West Bengal. 5
- b) Write their cultivation with special reference to land preparation, Fertilizer requirement, inter-cultural operation, irrigation and stick management. 10+10+10+5

8. a) Who is the father of Genetics. Write his work in brief. 10
- b) How many traits did he select for his experiment and what are those. 8
- c) State the laws of inheritance and how could he formulate those laws? 12
- d) Why did his selected traits did not show deviation from normal segregation ratio? 10

9. Write short notes on any eight.

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|--------------------|--------------------|---------------------|
| a) Certified seeds | b) Quality seeds | c) Quarantine |
| d) Triple Fusion | e) Chromatin Fiber | f) Lysosomes |
| g) Genetic erosion | h) Pest management | i) Medicinal plant. |
- 5x8

10. a) What is sporogenesis. 6
- b) Describe the processes of micro and mega sporogenesis and gamatogenesis. 10
- c) Differentiate between deficiency symptom and genetic disorders with examples. 14
- d) What is hetrosis. 10

