

2022

Botany

[Honours]

(B.Sc. Sixth Semester End Examination-2022)

PAPER- C13T

Full Marks: 40

Time: 02 Hrs

The figures in the right hand margin indicate marks

Candidates are required to give their answers in their own words as far as practicable

Illustrate the answers wherever necessary

1. Answer any five out of eight

5×2=10

- A. What is simplest amino acid involved in photosynthesis? Name the carbon dioxide acceptor molecule in Calvin cycle.
- B. What are the significance of cyanide resistant respiration?
- C. What is the chief form of nitrogen taken up by majority of plants from soil? Name one anaerobic N₂ fixing bacteria.
- D. What are isozymes?
- E. What is the significance of substrate level phosphorylation?

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- F. Why does heterocyst lack photosystem II?
- G. What is Q cycle?

2. Answer any four out of six **4×5=20**

- A. Draw and describe the Boyers conformational model.
- B. What is the difference between absorption spectrum and action spectrum?
- C. Give an account of the breakdown and synthesis of sucrose.
- D. What are the maximum yield of cytosolic ATP from complete aerobic oxidation of glucose via glycolysis and TCA cycle? Mention two significance of glycolysis and Krebs cycle.
- E. Write a short note on CAM with suitable diagram.
- F. What do you mean by gluconeogenesis? Write its role in metabolism of lipids during seed germination.

3. Answer any one out of two. **1×10=10**

- A. How will you differentiate Nitrification and Denitrification? Discuss the process of reduction of Nitrite to Ammonia. Write the role of leg-haemoglobin in plants. 3+4+3

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- B. Write a short note on MAP kinase cascade. Write the role of isozyme on regulation of metabolism. Write the difference between cyclic and noncyclic photophosphorylation. 4+3+3