

DSC – 300 (BOT-UG)

Third Year B.Sc. Degree Examination, November 2008
Directorate of Distance Education Course
BOTANY (Paper – IV)
Physiology, Plant Breeding and Tissue Culture

Time : 3 Hours

Max. Marks : 75

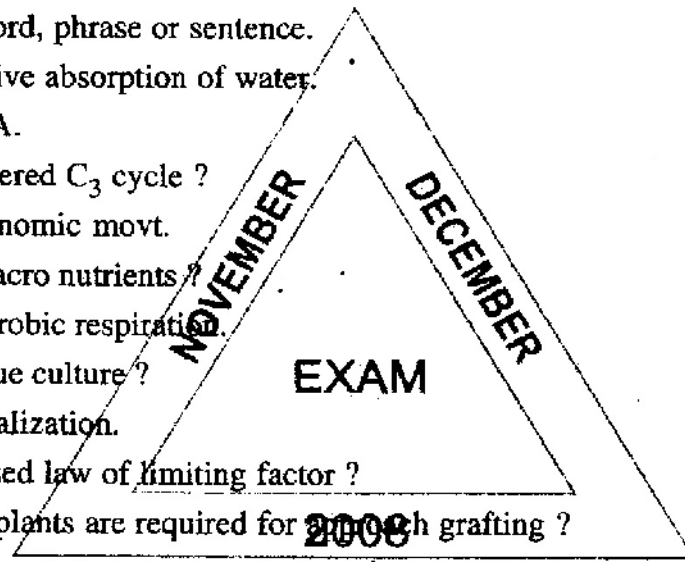
*Note : 1) Answer all questions.
2) Draw diagrams wherever necessary.*

I. **Simple questions.**

Answer in a word, phrase or sentence.

(10×1=10)

- 1) Define passive absorption of water.
- 2) Expand IAA.
- 3) Who discovered C_3 cycle ?
- 4) Define autonomic movt.
- 5) What are macro nutrients ?
- 6) Define anaerobic respiration.
- 7) What is tissue culture ?
- 8) Define vernalization.
- 9) Who proposed law of limiting factor ?
- 10) How many plants are required for 2008 grafting ?



II. **Short answer questions.**

Answer any **FIVE** of the following.

(5×3=15)

- 11) Mention the methods of plant breeding.
- 12) Draw a neat labelled diagram of stomata.
- 13) Explain phototropism.
- 14) Write a note on ringing experiment.
- 15) Explain Balsam plant experiment.
- 16) Write practical applications of cytokinin.
- 17) Explain external factors affecting photosynthesis.

P.T.O.



III. Short answer questions.

Answer any **FIVE** of the following :

(5×6=30)

- 18) Write schematic representation of glycolysis.
- 19) Explain cyclic photophosphorylation.
- 20) What is grafting ? Explain approach grafting.
- 21) Explain somatic hybridization.
- 22) Describe Munch's mass flow hypothesis.
- 23) Explain symbiosis.

IV. Long answer questions.

Answer any **TWO** of the following.

(10×2=20)

- 24) Explain C₃ cycle.
- 25) Describe photorespiration.
- 26) Explain factors affecting transpiration and add a note on significance of transpiration.
- 27) Explain :
 - 1) Seed dormancy
 - 2) Guttation.

