

AB-3360

Seat No. _____

M. Phil. Examination

April / May - 2003

Botany : Paper - II

(Recent Advances in Plant Science)

(New Course)

Time : 3 Hours]

[Total Marks : 100

- Instructions :** (1) Attempt in all **five** questions from any **three** sections listed below.
(2) All questions carry **equal** marks.
(3) Illustrate your answers with neat and labelled diagrams.

SECTION - I

(Biophysics, Biochemistry & Plant Physiology)

- 1** Write notes on :
 - (a) Free radicals
 - (b) Absorption spectra of Chlorophyll and protein.
- 2** Examine various factors affecting enzyme activity.
- 3** Write notes on :
 - (a) Photorespiration
 - (b) Bioassays of auxins and gibberellins.

SECTION - II

(Cytology & Genetics)

- 4** Discuss cell cycle.
- 5** Compare gene regulation models.
- 6** Write notes on :
 - (a) Physical mutagens
 - (b) Transformation and transduction.

SECTION - III
(Ecology)

- 7** Describe the energy flow in the ecosystem.
- 8** Examine various aspects of air pollution.
- 9** Write notes on :
- (a) Ecological pyramids
 - (b) Productivity of terrestrial ecosystem.

SECTION - IV
(Microbiology)

- 10** Compare classification systems for bacteria and virus.
- 11** Give modern classification of bacteria.
- 12.** Write notes on :
- (a) Different systems of classification of virus.
 - (b) Morphological characters used in classification of bacteria.