

JLR – 09/10

BOTANY

Time : 3 hours

Full Marks : 100

The questions are of equal value.

*Answer any **five** questions.*

*Illustrate your answers with diagrams,
wherever you can.*

1. Write critical account of any **two** of the following :
 - (a) Ultra-structure of cyanophycean cell
 - (b) Organization of shoot apical meristem in angiosperms
 - (c) Biogeochemical cycles
2. Describe any **two** of the following :
 - (a) Evolution of sporophyte in bryophytes
 - (b) Recombinant DNA technology
 - (c) Xerox succession
3. Give explanatory notes on any **two** of the following :
 - (a) Cytoplasmic inheritance

QS – 1/2

(Turn over)

-
- (b) Genetic recombination in Bacteria
 - (c) Hexose monophosphate shunt
4. Give the comprehensive account on any **two** of the following :
- (a) Hutchinson's system of classification
 - (b) Stellar evolution in pteridophytes
 - (c) Photorespiration and its significance
5. Explain any **two** of the following :
- (a) Development and types of Tetrasporic Embryo sacs in angiosperms
 - (b) Parasexuality in fungi
 - (c) Green house effect
6. Comment on any **two** of the following :
- (a) Heterospory — prerequisite to seed formation
 - (b) Transpiration — necessary evil
 - (c) Ginkgo — living fossil
7. Write account on any **two** of the following :
- (a) Thallus diversity in chlorophyta

-
- (b) Polymerase chain reaction
- (c) Standard deviation
8. Discuss critically on any **two** of the following :
- (a) Polyembryony
- (b) Nucleosome
- (c) Phytochrome — structure and function
9. Provide explanatory notes on any **two** of the following :
- (a) Distinguishing features of Asteraceae
- (b) Cell cycle and its regulation
- (c) Social forestry
10. Write account on any **two** of the following :
- (a) Molecular mode of action of gibberellins
- (b) Chemotaxonomy
- (c) Somatic hybridization

