

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

