Bachelor of Science (B.Sc.) Semester—VI (C.B.S.) Examination

PLANT PHYSIOLOGY AND BIOTECHNOLOGY

Paper—1

(Botany)

Time : Three Hours] [Maximum Marks : 50

N.B. :— (1) **All** questions are compulsory and carry equal marks.
(2) Illustrate your answers with suitable examples and draw well labelled diagrams wherever necessary.

1. Write on :
   (a) Seismonastic movements
   (b) Role of cytokinins and auxins. 5×2

OR

   Write short notes on :
   (c) Phytochromes
   (d) Ethylene and ABA
   (e) Phases of growth
   (f) Circadian rhythm. 2.5×4

2. Write on :
   (a) Causes of seed dormancy
   (b) Senescence. 5×2

OR

   Write short notes on :
   (c) Florigen
   (d) Hypersensitive response
   (e) Abscission
   (f) Scarification and stratification. 2.5×4

3. Write on :
   (a) Micropropagation and its applications
   (b) Preparation and constituents of MS-Media. 5×2

OR

   Write short notes on :
   (c) Leaf-disc culture
   (d) Autoclaving
   (e) Totipotency
   (f) Protoplast culture. 2.5×4

4. Write on :
   (a) Agrobacterium mediated gene transfer
   (b) cDNA library. 5×2

OR

   Write short notes on :
   (c) DNA polymerases
   (d) Genomic library
   (e) Advantages of transgenic plants
   (f) Plasmid vector. 2.5×4

5. Write in **two** or **three** lines only (any **TEN**). Diagrams are not necessary :

(a) Growth curve

(b) Geotropism

(c) Tropic movements

(d) Phenolic compounds

(e) Phototropism

(f) Vernalization

(g) Asceptic culture

(h) Haploid production

(i) Cybrids

(j) Endonucleases

(k) DNA-ligases

(l) Genetic engineering. 1×10=10