NKT/KS/17/5206

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 diagrams wherever necessary.

1. Write on :

   (a) Nastic Movements.

   (b) Role of Auxins. 5×2

OR

Write short notes on :

(c) Phases of Growth.

(d) Circadian Rhythms.

(e) Role of Cytokinins.

(f) Role of Ethylene. 2½×4

2. Write on :

   (a) Photoperiodism.

   (b) Methods to break seed dormancy. 5×2

OR

Write short notes on :

(c) Senescence.

(d) Vernalization.

(e) Role of Florigen.

(f) Role of Phenolic Compounds. 2½×4

3. Write on :

   (a) Callus culture and its application.

   (b) Protoplast culture and its application. 5×2

OR

Write short notes on :

(c) Totipotency.

(d) Anther culture.

(e) Cybrid production.

(f) Cell suspension culture. 2½×4

4. Write on :

(a) cDNA library.

(b) Advantages and disadvantages of transgenic plants. 5×2

OR

Write short notes on :

(c) Restriction enzymes.

(d) DNA polymerases.

(e) g-DNA library.

(f) Expression Vector. 2½×4

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

(a) ABA

(b) Pfr

(c) Tropic movement

(d) Abscission

(e) Terpenes

(f) Seed dormancy

(g) Sterilization

(h) *in vitro*

(i) Plant tissue culture

(j) rDNA

(k) Ti plasmid

(l) Ligases. 1×10=10