

KNT/KW/16/5229

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

BIOTECHNOLOGY

(Plant and Animal Biotechnology)

Paper—2

Time : Three Hours]

[Maximum Marks : 50

N.B. :— (1) **All** questions are compulsory and carry equal marks.

(2) Draw diagrams wherever necessary.

1. Discuss Tissue culture as a technique to produce novel plants. 10

OR

Briefly describe initiation and maintenance of callus culture. 10

2. Briefly discuss the role of tissues in micropropagation. 10

OR

What are transgenic plants ? Discuss the significance of Bt. Cotton. 10

3. Write notes on :

(a) Establishing Primary Culture 5

(b) Maintenance of cell lines. 5

OR

Describe various types of media used in ATC. 10

4. Describe various steps involved in in-vitro fertilization and embryo transfer in human. 10

OR

Write notes on :

(a) Gene therapy 5

(b) Transgenic animals. 5

5. Solve any **ten** :

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|---|---|
| (i) What is suspension culture ? | 1 |
| (ii) What is Callus ? | 1 |
| (iii) What is single cell clone ? | 1 |
| (iv) What is T _i plasmid ? | 1 |
| (v) What is somatic hybridization ? | 1 |
| (vi) Name two auxins used in PTC. | 1 |
| (vii) What are immortal cells ? | 1 |
| (viii) What is cell senescence ? | 1 |
| (ix) What do you mean by anchorage dependence ? | 1 |
| (x) What is recombinant vaccine ? | 1 |
| (xi) What is the role of somatostatin ? | 1 |
| (xii) Which company produced recombinant insulin for the first time ? | 1 |