

19002200



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Reg. No.....

Name.....

M.Sc. DEGREE (C.S.S.) EXAMINATION, NOVEMBER 2019

Third Semester

Faculty of Science

Branch VI—Botany

PC 11—BIOTECHNOLOGY

(2012—2018 Admissions)

Time : Three Hours

Maximum Weight : 30

I. Answer any *six* of the following in not less than 50 words. Weight 1 each :

- 1 Differentiate between submerged and solid state fermentation.
- 2 What is an epitope ?
- 3 What is embryo rescue ?
- 4 Differentiate between
 - (a) Humoral immunity.
 - (b) Cellular immunity.
- 5 What is MS medium ? List its main components.
- 6 Mention the factors influencing shoot bud differentiation.
- 7 What is automated DNA sequencing ?
- 8 What is GM food ?

(6 × 1 = 6)

II. Answer any *seven* of the following in not less than 100 words. Weight 2 each :

- 9 What are reporter systems ? Explain.
- 10 Briefly explain pattern receptors and MHC molecules.
- 11 Write a brief accounts on the following :
 - (a) Structural genomics.
 - (b) Microarray.
 - (c) Databases.
 - (d) Global sequence alignment.
- 12 Write short note artificial chromosomes as vectors in genetic engineering.
- 13 Explain the procedure and applications of mass spectrometry.
- 14 Give a brief account of antigen and antibody interactions.

Turn over





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- 15 Write a short note on bio weapons and bioterrorism.
- 16 List the applications of genetic engineering in genetic studies.
- 17 Explain procedure and applications of ELISA.
- 18 Describe the procedure for shoot tip culture.

(7 × 2 = 14)

III. Answer any *two* of the following in not less than 250 words. Weight 5 each :

19 Briefly explain following :

- | | |
|--------------|------------|
| (a) EMBI. | (b) PDB. |
| (c) Genbank. | (d) BLAST. |

- 20 Explain techniques and stages of micropropagation. Add a note on its advantages.
- 21 Briefly explain procedure and applications of cDNA library.

(2 × 5 = 10)

