

D 42505

(Pages : 2)

Name.....

Reg. No.....

FOURTH SEMESTER M.Sc. DEGREE EXAMINATION, JUNE 2018

(CUCSS)

Botany

BO 4ET 14 03—GENETIC ENGINEERING

(2010 Admissions)

Time : Three Hours

Maximum : 36 Weightage

I. Answer *all* the questions very briefly. Each question carries 1 weightage :

- 1 What are opines ?
- 2 Differentiate between microsatellites and minisatellites.
- 3 What is Gene Therapy ?
- 4 Differentiate between chemical and enzymatic method of DNA sequencing.
- 5 What are ESTs ? How they are useful as a marker ?
- 6 Differentiate between electroporation and microinjection.
- 7 What are the limitations of RAPD ?
- 8 Describe rDNA technology.
- 9 Describe biolistic delivery of gene.
- 10 What is a disarmed vector ?
- 11 What is DNA polymerase klenow ?
- 12 Write down the role of acetosyringone in T DNA transfer ?
- 13 What are edible vaccines ?
- 14 What is a split gene ?

(14 × 1 = 14weightage)

II. Answer any *seven* questions in not more than 100 words :

- 15 Discuss the techniques used for visualization and reading of DNA sequences.
- 16 Write down the protocol for the production of GEMs ?
- 17 What is the principle of genetic fingerprinting ?
- 18 Describe the use of rDNA technology in vaccine production.
- 19 Discuss the nonuniversal nature of genetic code.
- 20 What are transgenic plants ? How they are produced ?

Turn over

- 21 What is AFLP ? What are its limitations ?
- 22 Briefly describe applications of nanotechnology in genetic engineering.
- 23 Describe the role of GEMs in abatement of pollution ?
- 24 Discuss the difference between RAPD and RFLP.

(7 × 2 = 14 weightage)

III. Answer any *two* questions in 300 words each :

- 25 Write an essay on molecular markers and their applications.
- 26 Discuss the principle and versions of PCR.
- 27 Write an essay on gene expression.
- 28 Discuss the principle and applications of various blotting techniques.

(2 × 4 = 8 weightage)