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(Pages : 2)

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Name.....

Reg. No.....

**FOURTH SEMESTER M.Sc. DEGREE EXAMINATION, JUNE 2016**

(CUCSS)

Botany

BO 04 ET 14 (11)—GENETIC ENGINEERING

(2010 Admissions)

Time : Three Hours

Maximum : 36 Weightage

**Part A**

I. Answer *all* fourteen questions. Each answer should be brief. Each question carries 1 weightage :

- 1 How mRNAs are isolated ?
- 2 What is selectable marker gene ?
- 3 Write short notes on cytokines.
- 4 What is AFLP ?
- 5 What are CRY proteins ?
- 6 What is Linker DNA ?
- 7 What is terminator technology ?
- 8 What is meant by pBR322 gene targetting ?
- 9 What is the use of biochips ?
- 10 Give an example for transgenic animal.
- 11 What is nick translation ?
- 12 What are immunoglobulins ?
- 13 Comment on nested PCR.
- 14 Name *two* biopesticides.

(14 × 1 = 14 weightage)

**Part B**

Answer any *seven* questions. Each answer not exceeding 100 words. Each question carries 2 weightage :

- 15 Mention new trends in vaccinology.
- 16 Explain chromosome jumping.
- 17 What is M-13 sequencing ?
- 18 Compare monoclonal and polyclonal antibodies.

Turn over

- 19 What is PAGE ?
- 20 Expand RAPD and RFLP.
- 21 What is phospho-triester method ?
- 22 What is the use of green fluorescent protein ?
- 23 What are genomic libraries ?
- 24 What are Ti plasmids ?

(7 × 2 = 14 weightage)

### Part C

III. Answer any *two* questions. Each answer not exceeding 300 words. Each question carries 4 weightage :

- 25 Compare and contrast Southern blotting and Northern blotting techniques.
- 26 Give an account of the artificial synthesis of gene. Mention the contributions of H.G. Khorana.
- 27 What is a vector ? Describe the different kinds of vectors and their role in recombinant DNA technology.
- 28 Write an essay on genetically modified organisms.

(2 × 4 = 8 weightage)