11452 **(Pages : 2)** **Name**

Reg. No.....

FOURTH SEMESTER B.Sc. DEGREE EXAMINATION, MARCH 2013

(CCSS)

Biotechnology

BT4 B01—MINOBIAL GENETICS

Maximum : 30 Weightage

ıe : Three Hours

I. Objective Type Questions :

A. Name the following :-

1 Simplest transposon.

2 The bacteria used in Ames test for mutagencsis.

3 Largest virus.

4 A prion disease.

5 The test used to measure the mutation rates.

6 The phages that are capable of both lytic and lysogenic pathway are called.

B. Select the correct answer :

7 Transduction is a process :

(a) By cell to cell contact. (b) Uptake of naked DNA.

(c) Through pili. (d) Using Bacteriophages.

8 The plasmid present in Agrobactericum rhizogene :

(a) Ti plasmid. (b) Col plasmid.

(c) Ri plasmid. (d) RK_2 plasmid.

9 A bacterium that contains and F factor in its chromosome is known as :

(a) F' cell. (b) F cell.

(c) Hfr cell. (d) None of these.

10 Natural competency for transformation occur on :

(a) E.coli. (b) Bacillus subtilis.

(c) Bacillus licheniformis. (d) Vibriocholera.

11 The source of green fluorescent protein :

(a) Agaricus. (b) Acquioria victoria.

(c) Cyanobacteria. (d) Gracilleria.

Turn over

12 The 1st bacterial genome to be completely sequenced :

(a) E.coli. (b) Mycobacterium.

(c) Haemophilus influenza. (d) Bacillus.

(12 x = 3 weightag

II. Short Answer Type Questions. Answer *all* nine questions :

13 Fluctuation tent.

14 LINES and SINES.

15 Varoids.

16 Lamadaphage.

17 Site specific recombinase.

18 Suppression mutation.

19 Intercalating agents.

20 Plasmid copy number.

21 Ti plasmid.

x 1 = 9 weightagi

III. Short Essay or Paragraph Questions. Answer any *five* questions :

22 The method to prepare competence cell.

23 AC and DC elements in maize.

24 Explain replication of viruses.

25 Explain structure and mechanism of transpositin of composite transposon.

26 Explain site specific recombination.

27 Classify viruses based on their nucleic acid.

28 What is specialized transduction ? Explain with suitbale example.

5 x 2 = 10 weightage

IV. Essay Questions. Answer any *two* questions :

29 Write an essay on types of mutation.

30 Give an account on transposable elements.

31 Explain cultivation and enumeration of viruses.

(2 x 4 = 8 weight.