

11452

(Pages : 2)

Name

Reg. No.....

FOURTH SEMESTER B.Sc. DEGREE EXAMINATION, MARCH 2013

(CCSS)

Biotechnology

BT4 B01—MINOBIAL GENETICS

Maximum : 30 Weightage

Time : Three Hours

I. Objective Type Questions :

A. Name the following :-

- 1 Simplest transposon.
- 2 The bacteria used in Ames test for **mutagenesis**.
- 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 **Agrobacterium rhizogene** :

- | | |
|------------------------|------------------------------------|
| (a) Ti plasmid. | (b) Co1 plasmid. |
| (c) Ri plasmid. | (d) RK₂ 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) Vibrio cholera . |

11 The source of green fluorescent protein :

- | | |
|----------------------------|---------------------------------|
| (a) Agaricus. | (b) Acquioria victoria . |
| (c) Cyanobacteria . | (d) Gracillera . |

Turn over

12 The 1st bacterial **genome** to be completely sequenced :

- (a) **E.coli.** (b) Mycobacterium.
(c) **Haemophilus influenza.** ———(d) Bacillus.

(12 x 3 = 36 weightage)

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 weightage

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 **transposin** 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.