

D 21521

(Time : 2)

Name.....

Reg. No.....

THIRD SEMESTER B.Sc. DEGREE EXAMINATION, NOVEMBER 2011

(C.C.S.S.)

Microbiology—Core Course

MU04 MOLECULAR MICROBIOLOGY

Time : Three

Maximum Weightage : 30

I. Objective Type Questions. Answer till twelve questions :

1 The naturally occurring form of DNA :

- (a) A DNA. (b) B DNA.
(c) Z DNA. (d) All forms.

2 Wobble hypothesis propose*:

- (a) Universality of genetic code.
(b) Flexibility in the 3rd base of genetic code.
(c) Complementarity of genetic code.
(d) Punctuations in genetic code.

Catabolic repression is present in :

- (a) Tryptophan operon. (b) Histidine operon.
(c) Arabinose operon. (d) Lactose operon.

4 At 111 codon encodes

- (a) Tryptophan (b) Methionine.
(c) I "Wine (d) Stop codon.

h The • of DNA is nm.

11 A complete set of all the aphase chromosomes in a cell is called _____

I DNA super coiling is brought about by — enzyme that are found in all organisms.

S DNA polymerase I is also

9 DNA replicates in which phase of cell cycle ?

10 Who is known as father of genetics ?

11 Which experiment explain DNA replication is semiconservative ?

12 Who proposed one gene one enzyme hypothesis ?

(12 x ¼ = 3 weightage)

Turn over

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

- 13 What is an operon ?
- 14 Function of RNA polymerase.
- 15 What is telomerase ?
- 16 Which is a trailer sequence ?
- 17 Mendel's law of segregation.
- 18 What is an inducible enzyme ?
- 19 What is a nucleotide ?
- 20 What is hn RNA.
- 21 What is heredity ?

(9 x 1 = 9 weightage)

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

- 22 Explain Lac operon.
- 23 Write a note on DNA binding proteins.
- 24 Explain structure and function of histones.
- 25 Explain rolling circle replication with suitable example.
- 26 Discuss about post translational modifications in eukaryotes.
- 27 Explain genetic code.
- 28 What are the different stages of mitosis.

(5 x 2 = 10 weightage)

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

- 29 Explain organisation of eukaryotic chromosomes.
- 30 Discuss about protein synthesis in prokaryotes.
- 31 Explain structure and function of DNA and RNA.

(2 X 4 = 8 weightage)