

D 51497

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Name.....

Reg. No.

THIRD SEMESTER B.Sc. DEGREE EXAMINATION, NOVEMBER 2013

(U.G.-CCSS)

Microbiology (Core Course)

MB 3B 04—MOLECULAR MICROBIOLOGY

Time : Three Hours

Maximum : 30 Weightage

Part A

Choose the correct answer from the following. Weightage for each answer is $\frac{1}{4}$:

1. Which among the following is a stop codon ?
(a) UAA. (b) AUG.
(c) CUG. (d) AAA.
2. The transforming principle as identified through Griffith experiment was later found to be :
(a) RNA. (b) DNA.
(c) Protein. (d) Polysaccharide.
3. In lac operon, lactose act as :
(a) Inducer. (b) Repressor.
(c) Both (a) and (b). (d) None of the above.
4. The final stage of meiotic prophase I is called :
(a) Pachytene. (b) Diakinesis.
(c) Leptotene. (d) Zygotene.

Fill blanks of the following. Weightage for each answer is $\frac{1}{4}$:

5. The negative charge of DNA is due to the presence of _____
6. An example for repressible operon is _____
7. The unwinding of double stranded DNA for replication is carried out by _____
8. The wobble hypothesis was proposed by _____

Answer in single word of the following. Weightage for each answer is $\frac{1}{4}$:

9. Which stage of prophase I of meiosis is characterised by the pairing of homologous chromosomes ?
10. Which RNA polymerase of Eukaryote is responsible for rRNA synthesis ?

Turn over

11. The number of enzymes coded by structural genes of lac operon is.
12. Meselson and stahl experiment was the demonstration of :

(12 x $\frac{1}{4}$ = 3 weightage)

Part B

Explain the following *nine* questions. Weightage for each answer is 1 :

13. Nucleoside.
14. Law of segregation.
15. HI-Histone.
16. Crossing over.
17. Function of tRNA.
18. Shine-Dalyarso sequence.
19. B DNA.
20. Peptidyl transferase.
21. Catabolite gene Activator Protein (CAP).

(9 x 1 = 9 weightage)

Part C

Write short essay on any *five* questions from the following. Weightage for each answer is 2 :

22. Rolling circle replication.
23. rRNA.
24. One gene one enzyme hypothesis.
25. Genetic code.
26. DNA binding proteins.
27. RNA processing in Eukaryotes.
28. Nucleoid structure.

(5 x 2 = 10 weightage)

Part D

Write essay on any *two* questions from the following. Weightage for each answer is 4 :

29. Explain Trp operon.
30. Explain Meiosis.
31. Explain post translational modifications.

(2 x 4 = 8 weightage)