C 80850-B (Pages : 2) Name.....

Reg. No.....

FOURTH SEMESTER (CUCBCSS—UG) DEGREE EXAMINATION, APRIL 2020

Common Course

MBG 4A 14—MOLECULAR BIOLOGY

(2018 Admissions)

Time : Three Hours Maximum : 80 Marks

Section A

Answer **all** *the questions.*

Each question carries ½ mark.

1. Mutation which introduce the stop codon is called ———— mutation.
2. The inducer in the lac operon is ————.
3. Number of structural genes of Trp operon is ————.
4. AUG is commonly known as ————.
5. DNA glycosylases enzymes involved in ————.
6. 16SrRNA is a component of ————.
7. The nucleosome core particle consists of approximately ———— bp of DNA.
8. Trisomy 21 is commonly known as ————.
9. The histone protein which binds to the linker DNA between nucleosomes is ————.
10. Short fragments of DNA created on the lagging strand during DNA replication is called ————.
11. The six-base consensus sequence AGGAGG is well known as ————.
12. A change in a nucleotide pair in a mutant gene that restores the original sequence and hence the original phenotype is called ————.

(12 × ½ = 6 marks)

Section B

Answer **all** *the following.*

Each question carries 2 marks.

13. Linking number.
14. Cot curve.
15. mRNA.
16. Transforming principle.
17. Rolling circle replication.
18. Replication fork.

Turn over

19. Replica plating.
20. Initiation factor.
21. Rho dependent termination.
22. Promoter.

(10 × 2 = 20 marks)

Section C

Write short notes on any **six** *of the following.*
Each question carries 5 *marks.*

23. Types of histones.
24. Types of RNA.
25. Semiconservative replication.
26. Chromosomal mutations.
27. Post translational modifications.
28. Post transcriptional modifications.
29. Detection of mutations.
30. Prokaryotic translation.

(6 × 5 = 30 marks)

Section D

Write essay on any **two** *of the following.*
Each question carries 12 *marks.*

31. Write an essay on gene regulation in prokaryotes.
32. Write an essay on mutations and types of mutations.
33. Write an essay on DNA repair mechanisms.

(2 × 12 = 24 marks)