14BCV09 / 14BCU09

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION MAY 2019
(Third Semester)

Branch - **BIOCHEMISTRY**

MOLECULAR BIOLOGY

Time : Three Hours Maximum : 75 Marks

SECTION-A (20 Marks)
Answer **ALL** questions
ALL questions carry **EQUAL** marks (10 x 2 = 20)

1 Give the role of telomerase.
2 Name the enzymes involvedin eukaryotic replication.
3 Define: Reverse transcription.
4 What is genetic code?
5 Name the inhibitors of translation.
6 List the components of prokaryotic ribosomes.
7 What is SOS response?
8 Give the effects of nitrous oxide in damaging the DNA.
9 What are transposons?
10 Define: Recombination.

SECTION - B (25 Marks)
Answer **ALL** Questions
ALL Questions Carry **EQUAL** Marks (5 x 5 = 25)

11 a Write a short note on conjugation.
OR
b What is bacterial transformation? Give a short account on it.

12 a How mRNA is modified after transcription?
OR
b Write a short note on reverse transcription.

13 a Give the post translational modifications of proteins.
OR
b How translation process is terminated?

14 a What is DNA methylation? Give its role.
OR
b Explain how UV light and alkylation damage DNA.

15 a Write a short note on non composite transposons.
OR
b What are the types of gene mutation? Brief out any two.

SECTION - C (30 Marks)
Answer any **THREE** Questions
ALL Questions Carry **EQUAL** Marks (3 x 10 = 30)

16 Write an essay on prokaryotic DNA replication.

• 17 Explain the following (i) Eukaryotic promoters (ii) Eukaryotic enhancers.

18 Elaborate: Gene expression in chloroplast.

19 Explain in detail: Lac operon.

20 Write a detailed account on McClintocks discovery of transposons in plants.