

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION DECEMBER 2018
(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 Define: Conjugation.
- 2 Write any two differences between prokaryotic and Eukaryotic replication.
- 3 Name the transcription factors.
- 4 List the Eukaryotic promoters.
- 5 What are the components of Eukaryotic ribosomes?
- 6 Name the elongation factors of Eukaryotic translation.
- 7 Define: Direct repair.
- 8 What is operon?
- 9 What is silent mutation?
- 10 Define : Composite transposon.

SECTION - B (25 Marks)

Answer **ALL** Questions

ALL Questions Carry **EQUAL** Marks (5 x 5 = 25)

- 11 a What is rolling circle replication? Explain with neat diagram.
OR
b Mention about the replication enzymes.
- 12 a Give a brief account on reverse transcription.
OR
b Write a short note on RNA polymerases.
- 13 a How protein translation is inhibited?
OR
b Explain how amino acids are activated for translation.
- 14 a How deamination and depurination damages DNA?
OR
b What are histones? Give their role.
- 15 a Write a brief note on transposons.
OR
b Explain any two gene mutations.

SECTION - C (30 Marks)

Answer any **THREE** Questions

ALL Questions Carry **EQUAL** Marks (3 x 10 = 30)

- 16 Explain how DNA was proved as genetic material?
- 17 Elaborate the nature and characteristics of genetic code.
- 18 Explain the initiation, elongation and termination of prokaryotic translation.
- 19 Explain the mechanism of Trp operon.