

**PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)**

**MSc DEGREE EXAMINATION MAY 2018
(Second Semester)**

Branch – BIOCHEMISTRY

MOLECULAR GENETICS

Time: Three Hours

Maximum: 75 Marks

SECTION -A (30 Marks)

Answer **ALL** questions

ALL questions carry **EQUAL** Marks (5 x 6 = 30)

- 1 a Explain cot curve.
OR
b Write a note on mutagenesis.
- 2 a Discuss about organization of mitochondrial DNA.
OR
b Write a note on homologous recombination with neat sketches.
- 3 a Comment on DNA binding motifs.
OR
b Write a note on RNA binding motifs.
- 4 a Discuss the role of serum response factor in brain development and function.
OR
b Write a note on the transcriptional abnormalities in Huntington's disease.
- 5 a Write a note on molecular biology of AIDS.
OR
b Explain the viral infection strategy.

SECTION -B (45 Marks)

Answer any **THREE** questions

ALL questions carry **EQUAL** Marks (3 x 15 = 45)

- 6 Describe the transposons of bacteria.
- 7 Discuss about cytoplasmic inheritance with suitable example.
- 8 Elaborate various binding techniques with suitable diagram.
- 9 Describe the essential transcription factors for neuron specification and differentiation.
- 10 Explain the Baltimore classification of replication.