

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION MAY 2019
(Third Semester)

Branch - **BIOCHEMISTRY**

MOLECULAR BIOTECHNOLOGY

Time: Three Hours

Maximum: 75 Marks

SECTION -A (30 Marks)

Answer **ALL** questions

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

- 1 a What are the uses of linkers and adapters in recombinant DNA technology?
OR
b Comment on cosmids as cloning vehicles.
- 2 a Explain the principle of DNA microarray technique.
OR
b Explain Hybrid release translation techniques.
- 3 a Write short notes on reporter genes.
OR
b What are the uses of transgenic animals in Biotechnology?
- 4 a What are the two types of marker genes?
OR
b Comment on plant as bioreactors.
- 5 a Write the advantages and disadvantages of stem cells.
OR
b Brief on neural stem cell based therapy for Parkinson's and Alzheimer's disease.

SECTION -B (45 Marks)

Answer any **THREE** questions

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

- 6 Write in detail about yeast cloning vectors.
- 7 Describe various methods of selection and screening of recombinant DNA.
- 8 Explain various gene transfer methods to animals.
- 9 Give a detailed account on herbicide and insect resistance transgenic plants.
- 10 Write about : (i) Somatic cell gene therapy (ii) vectors in gene therapy.