

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION DECEMBER 2018
(Third Semester)

Branch -**BOTANY**

BIOTECHNOLOGY & GENETIC ENGINEERING

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 the method of immobilization of enzymes.
OR
b Assess the progress of biotechnology in India during the past decade.
- 2 a Explain the advancement of paper industry in India through biotechnology.
OR
b Give an account on the method of isolation and culturing of *Streptomyces olivaceus*.
- 3 a Write an account on restriction endonucleases.
OR
b Write the procedure to separate DNA by AGE.
- 4 a Give an account on cDNA libraries.
OR
b Explain the method of screening for recombinants.
- 5 a Write the procedure for patenting biological materials.
OR
b Give an account on IPR.

SECTION -B (45 Marks)

Answer any **THREE** questions

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

- 6 Describe the industrial production of Proteases.
- 7 Describe the procedure of downstream processing.
- 8 • Describe DNA sequencing by Maxam and Gilbert's method.
- 9 Explain the working principle of PCR.
- 10 Discuss with any two case studies the applications of biotechnology in agriculture.