

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION MAY 2019
(Fourth Semester)

Branch - **APPLIED MICROBIOLOGY**

APPLIED 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 monoclonal antibodies? Briefly explain its production method and application.
OR
b Give an account of production of growth hormones by r-DNA technology.
- 2 a Write about physical method of gene transfer into a plants.
OR
b How herbicide resistant plants are developed by recombinant method? Explain.
- 3 a What is stem cell? Explain about their types and uses.
OR
b Briefly highlighten the steps involved in IVF process.
- 4 a Give an account on somatic gene therapy cloning.
OR
b Illustrate the ethical aspects of human cloning.
- 5 a What is GMOs? Write a note on GMOs impacts in the environments.
OR
b Briefly explain about IPR concepts and regulations of GMOS.

SECTION -B (45 Marks!)

Answer any **THREE** questions

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

- 6 Explain about r-DNA techniques used on novel antibiotic synthesis with suitable example.
- 7 Give the detail account of Ti plasmids and its uses for gene transfer in plants.
- 8 Describe in detail the development of transgenic cattle and its uses.
- 9 What is gene mapping? Explain about gene mapping method and its applications.
- 10 Discuss in detail about cleaning of oil spills by GMOs.