

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION DECEMBER 2018
(Third Semester)

Branch - APPLIED MICROBIOLOGY

PRINCIPLES OF GENETIC ENGINEERING

Time: Three Hours

Maximum: 75 Marks

SECTION -A f30 Marks!

Answer ALL questions

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

- 1 a Define endonucleases. Write brief notes on restriction endonucleases and their applications.
OR
b Discuss the advantages of using M13 as cloning vectors.
- 2 a Explain about colony hybridization.
OR
b How gene expression analysis is done by northern blotting?
- 3 a List the applications of protein microarray.
OR
b Write short notes on SAGE & its analysis.
- 4 a Give an account on shotgun sequencing.
OR
b What is the principle behind array CGH. Add notes on their applications.
- 5 a Differentiate between genomic library & cDNA libraries.
OR
b Discuss the methods of gene delivery and their applications.

SECTION -B (45 Marks!)

Answer any THREE questions

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

- 6 Explain about DNA fingerprinting and its applications.
- 7 Give an account on bacterial T7 promoter based vectors.
- 8 Give an account on reporters used in protein localization.
- 9 Explain the principle and applications of Western blotting.
- 10 Explain about T / A PCR cloning.

Z-Z-Z

END