

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION DECEMBER 2019
(Fifth Semester)

Branch - MICROBIOLOGY

PRINCIPLES OF GENETIC ENGINEERING

Time : Three Hours

Maximum : 75 Marks

SECTION-A (20 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(10x2 = 20)

- 1 Adaptors.
- 2 Hind III.
- 3 Episome.
- 4 Virulence Plasmid.
- 5 Competence.
- 6 Trasfection.
- 7 Cloning vector.
- 8 DNA hybridization.
- 9 Thermal cycler.
- 10 Southern blotting.

SECTION - B (25 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks (5 x 5 = 25)

- 11 a Mention about the general characteristics and classification of restriction enzyme.
OR
b Give a brief account on T₄DNA ligase.
- 12 a Briefly explain about plasmids.
OR
b Describe the expansion vectors.
- 13 a Write a brief note on shuttle vectors.
OR
b Explain in detail about Baculo viral vectors.
- 14 a Give an account on construction of cDNA libraries.
OR
b Describe in brief about Immunological detection.
- 15 a What are the steps involved in Northern blotting technique?
OR
b Explain the role of Sanger's method of DNA sequencing.

SECTION - C (30 Marks)

Answer any THREE Questions

ALL Questions Carry EQUAL Marks (3 x 10 = 30)

- 16 Discuss about the gene cloning methods.
- 17 Give a elaborate account on PBR322 used as a cloning vector.
- 18 Write a detailed note on transfection technique.
- 19 Explain about the genomic library.

on pioVinratp thp various; stapes of PCR and its applications.