

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION DECEMBER 2017
(Fifth Semester)

Branch- **ZOOLOGY**

BIOTECHNOLOGY -1

Time : Three Hours

Maximum : 75 Marks

SECTION-A (20 Marks)

Answer **ALL** questions

ALL questions carry **EQUAL** marks (10 x 2 = 20)

- 1 PCR.
- 2 Linkers.
- 3 PBR322.
- 4 Biolistics.
- 5 Insertional inactivation.
- 6 Use of Northern blotting technique.
- 7 Maxam - Gilbert method.
- 8 Interferon.
- 9 Monoclonal antibodies.
- 10 Fingerprinting.

SECTION - B (25 Marks!)

Answer **ALL** Questions

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

- 11 a Describe the scope and importance of biotechnology.
OR
b Give a brief note on enzymes used in genetic engineering.
- 12 a Explain the cosmids.
OR
b Describe DNA library.
- 13 a Explain how do the rDNA is transferred using transformation and transduction into a bacterial host cell.
OR
b Describe the southern blotting technique and its applications.
- 14 a Write a short note on gene cloning in eukaryotic animal cell.
OR
b Describe DNA sequencing.
- 15 a How to diagnose the genetic diseases in man?
OR
b Explain the probe technology using DNA.

SECTION - C (30 Marks)

Answer any **THREE** Questions

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

- 16 Write an essay on principle, application and advantages of Electrophoresis and polymerase chain reaction techniques in genetic engineering.
- 17 Write an essay on cloning vectors.
- 18 How to identify or select the cloned recombinants?
- 19 Write an account on role of genetic engineering in human welfare.
- 20 Give a detailed account on gene therapy.