

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION MAY 2018
(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 DNA Ligase.
- 2 Beers Law.
- 3 Plasmids.
- 4 Shuttle Vectors.
- 5 Transformation.
- 6 DNA Probe.
- 7 Interferons.
- 8 Lipofection.
- 9 DNA vaccines.
- 10 Embryo therapy.

SECTION - B (25 Marks)

Answer **ALL** Questions

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

- 11 a Write a notes on (a) Alkaline phosphatase (b) Reverse transcriptase
OR
b Describe the technique of Agarose gel electrophoresis.
- 12 a Describe the structure of P^{8^22}
OR
b Explain the basic strategies of recombinant DNA technology.
- 13 a Write notes on Transfection.
OR
b Explain western blotting technique.
- 14 a Describe Maxam and Gilbert's chemical degradation method of DNA sequencing
OR
b Describe the method of producing human growth hormone by rDNA technology.
- 15 a Describe the uses of monoclonal antibodies.
OR
b Write notes-on DNA profiling.

SECTION - C (30 Marks)

Answer any **THREE** Questions

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

- 16 Describe the principle, working mechanism and uses of PCR.
- 17 Describe the technique inserting a foreign DNA fragment into a vector.
- 18 Write about the selection of recombinants by colony hybridization technique.
- 19 Discuss the role of genetic engineering in human welfare.
- 20 What is Gene therapy? Write a detailed note on different types and