

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)
BSc DEGREE EXAMINATION DECEMBER 2017
(Fourth Semester)

Branch - **BIOCHEMISTRY**

RECOMBINANT DNA TECHNOLOGY

Time : Three Hours

Maximum : 75 Marks

SECTION-A (20 Marks)

Answer **ALL** questions

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

- 1 Define a Cloning vehicle.
- 2 What is restriction digestion?
- 3 Define Binary vector.
- 4 What is Lac selection?
- 5 Give any two labeling methods of DNA probe.
- 6 Define Western Blotting.
- 7 Name the enzyme used in PCR and where it is obtained from.
- 8 What is HART?
- 9 Define Expression vectors.
- 10 Give two applications of TPA.

SECTION - B (25 Marks)

Answer **ALL** Questions

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

- 11 a How will you prepare plasmid DNA from bacteria?
OR
b How is Ligation performed?
- 12 a Brief on the special features of M13 cloning vector.
OR
b Discuss on any ONE method of identifying transformed cells.
- 13 a How will you label a probe and list the application of probe.
OR
b Elaborate on RFLP technique and its application.
- 14 a Comment on Finger printing technique.
OR
b Brief on protein engineering.
- 15 a Discuss on the engineering of Human insulin.
OR
b Narrate on the Hazardous and safety aspects of genetic engineering.

SECTION - C (30 Marks)

Answer any **THREE** Questions

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

- 16 Comment on the steps involved in Gene cloning.
- 17 How will you perform a restriction digest in your laboratory?
- 18 Sketch the structure of pBR322 and its properties.
- 19 Brief on the gene amplification technique and its four application.
nivri/w on the Yeast system for HBVSAg production.

Z-Z-Z

END