**14BCV14 / 14BCU14**

**PSG COLLEGE OF ARTS & SCIENCE**
(AUTONOMOUS)

**BSc DEGREE EXAMINATION MAY 2019**
(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 Give three important properties of vectors.
2 What are the tools of genetic engineering?
3 Define shuttle vectors.
4 Define transformants.
5 Define CDNA library.
6 What is RFLP?
7 What is HRT and HART?
8 What is protein engineering?
9 Define fusion proteins.
10 What are three types of interferons?

**SECTION - B (25 Marks)**

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

11 a What are the applications of gene cloning?

OR

b What are the steps in plasmid DNA isolation from bacteria?

12 a Write a short note on PBR 322.

OR

b Explain about introduction of phage DNA into bacterial cells.

13 a What is probe? Describe about labeling of probe.

OR

b Write in detail about southern blotting.

14 a Give an account on Sanger's method of DNA sequencing.

OR

b What are the steps of PCR? Give its application.

15 a Give an account on expression vectors.

OR

b Write about production of tissue plasminogen activator.

**SECTION - C (30 Marks)**

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

16 Explain in detail about bacteriophage vector with example.
17 How are the recombinants identified?
18 Write in detail about construction of genomic library.
19 Explain about genetic finger printing technique and itsapplication.
20 Write in detail about genetic engineering of human insulin.