PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION MAY 2019
(Fourth Semester)

Branch- **MICROBIOLOGY**

BIOINSTRUMENTATION

Time : Three Hours Maximum : 75 Marks

SECTION-A (20 Marks!
Answer **ALL** questions
ALL questions carry **EQUAL** marks (10 x 2 = 20)

1 Calomel electrode.
2 Biosensors.
3 Rotars.
4 RPM.
5 Chromatography.
6 SCOT.
7 Ethidium bromide.
8 TEMED.
9 Radioactivity.
10 Half life.

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

11 a Write short note on Beer Lambert's law.
OR
b Write about the pH meter and its working mechanism.

12 a What is density gradient centrifugation? Add a note on its types.
OR
b Discuss about the types of centrifuges?

13 a Write neat diagram of gas liquid chromatography and its applications.
OR
b Explain Ion exchange chromatography and its application.

14 a Write about the properties of agarose and its uses.
OR
b Explain the principles of rocket immuno electrophoresis with neat diagram.

15 a Write short notes on radioactivity and its types.
OR
b What is radio isotopes and its application in biology?

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

16 Write about principle, mechanism and applications of IJV visible spectrophotometer.

17 Explain in detail about the major parts of HPLC and its applications.

18 Discuss in detail about principle of SDS - PAGE and its applications.

19 What is scintillation counter types and its uses?

20 Write an essay on preparative ultracentrifugation.