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PSG COLLEGE OF ARTS & SCIENCE . (AUTONOMOUS)

BSc DEGREE EXAMINATION MAY 2017 (Fourth Semester)

Branch - MICROBIOLOGY

BIOINSTRUMENTATION

Time: Three Hours Maximum: 75 Marks

SECTION-A (20 Marks)

Answer ALL questions

ALL questions carry EQUAL marks (10x2 = 20)

- 1 . Bacterial electrode.
- 2 Enzyme immunosensor.
- 3 Density gradient centrifugation.
- 4 Centrifuge.
- 5 Gel exclusion chromatography.
- 6 Adsorption chromatography.
- 7 Cocenter immuno electrophoresis.
- 8 Photometric detector.
- 9 Radioactivity.
- 10 · Radio isotope.

SECTION - B (25 Marks!

Answer ALL Questions

ALL Questions Carry EQUAL Marks ($5 \times 5 = 25$)

11 a Explain Beer-Lamberts Law.

OR

- / b What is biosensor's explain with suitable example?
- 12 a Explain the principle and mechanism of ultracentrifuge.

OR

- b Explain about density gradient centrifugation.
- 13 a Explain about partition chromatography.

OR

- b Write about gel permission chromatography. .
- 14 a Write about factor's affecting gel electrophoresis.

OR'

- b What is difference between agarose'gel electrophoresis and polyacrylamide gel electrophoresis?
- 15 a Explain the working principle of GM counter.

OR

b Write short note on scintillation counter.

SECTION - C (30 Marks!

Answer any THREE Questions

ALL Questions Carry EQUAL Marks $(3 \times 10 = 30)$

- Discuss principle and mechanism of pH meter.
- 17 Elaborate on the working principle of Peparative centrifuge with neat diagram.
- Discuss the principle & mechanism of gas-liquid chromatography.
- 19' Explain about vertical gel electrophoreses and its application.
- Explain in detail about solid & liquid Scintillation counter.