

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

Branch - **MICROBIOLOGY**

CHEMISTRY FOR MICROBIOLOGY

Time : Three Hours

Maximum : 75 Marks

SECTION-A (20 Marks)

Answer ALL questions

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

- 1 Define normality.
- 2 What is green chemistry?
- 3 What are analgesics? Give an example.
- 4 Give the function of vitamins A and K.
- 5 What are natural fertilizers? Give an example.
- 6 Illustrate Insecticides.
- 7 Write any one preparation and biological application of nitrocellulose.
- 8 What are ionic and non-ionic detergents?
- 9 How is leather preserved?
- 10 What do you mean by starch adhesives?

SECTION - B (25 Marks)

Answer ALL Questions

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

- 11 a Explain the technique of sublimation.
OR
b Write any two green syntheses.
- 12 a Describe conformational analysis of ethane.
OR
b Draw the structural representation and diseases of the following vitamins
a) B b) D. (2 V₂ + 2 V₂)
- 13 a How are ammonium nitrate and urea manufactured?
OR
b Write notes on a) Nicotine and b) Allethrin.
- 14 a Explain the manufacturing process of essential oils.
OR
b Distinguish between thermoplastic and thermosetting plastics.
- 15 a Describe the manufacturing process of leather.
OR
b Explain the following process involved in leather industry
(a) Tanning and (b) Finishing. (2 V₂ + 2 V_i)

SECTION - C (30 Marks)

Answer any **THREE** Questions

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

- 16 Describe the principle and technique of steam distillation.
- 17 Discuss the conformational analysis of cyclohexane with energy diagram.
- 18 a) Explain the manufacture of triple superphosphate. (5)
b) Write notes on (i) Lead arsenate (ii) Calcium arsenate. (2 V_i + 2 'A')
- 19 a) Write the preparation of the following (i) Vanillin (ii) Cocoa (iii) Polyethylene,
b) What are the enzymes used in detergent industry? (6+4)
- 20 a) Explain the following adhesives (i) Rubber based adhesives, (ii) Silicate adhesives,
b) List out the forms and types of leather. (6+4)