

BSc DEGREE EXAMINATION MAY 2018
(First Semester)

Branch – **NUTRITION, FOOD SERVICE MANAGEMENT & DIETETICS**

CHEMISTRY – I

Time : Three Hours

Maximum : 75 Marks

SECTION-A (20 Marks)

Answer **ALL** questions

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

- 1 Write any two principles of Volumetric analysis.
- 2 Distinguish between precision and accuracy.
- 3 Give any two examples for oxidizing agents.
- 4 Give the shape of PCl_5 .
- 5 What are Carbohydrates?
- 6 Write any two properties of Nicotine.
- 7 What is meant by Auxochrome?
- 8 Mention any two examples for disinfectants.
- 9 State Second law of Thermodynamics.
- 10 State Carnot's theorem.

SECTION - B (25 Marks)

Answer **ALL** Questions

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

- 11 a What are Primary and Secondary standards in volumetric analysis? Give examples.
OR
b Define the term Indicator. How does Phenolphthalein act as an indicator?
- 12 a Explain the following with examples:
(i) Ionic bonding (ii) Co-ordinate bonding
OR
b Discuss about Oxidizing and Reducing agents with examples.
- 13 a Write the isolation of piperine and its properties.
OR
b Write the preparation and uses of Polyethylene.
- 14 a What are Analgesics? Write two examples with its uses.
OR
b Write the preparation and uses of Crystal Violet.
- 15 a What are the needs for the Second law of thermodynamics?
OR
b Define: (i) Normality (ii) Molarity (iii) Volume Percentage.

SECTION - C (30 Marks)

Answer any **THREE** Questions

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

- 16 Explain (i) acid-base titration (ii) Redox and Precipitation titrations
- 17 Explain the shapes of BF_3 and IF_6 molecules with neat diagram.
- 18 (i) Write Isoprene rule.
(ii) Explain the Isolation and uses of Geraniol.
- 19 (i) What are Antibiotics and disinfectants? Give two examples with their uses.
(ii) How will you prepare Magenta? Write its uses.
- 20 (i) Derive an expression for equilibrium constant for the dissociation of HI.
(ii) State the first law of Thermodynamics.