

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION MAY 2017
(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)

- I What is called indicators? Give two examples.
2. What do you mean by secondary standard? Give one example.
- 3 What is hybridisation?
- 4 Define oxidation number with one example.
- 5 What is called Alkaloids and Terpenoids?
- 6 Define isoprene rule.
- 7 What is meant by chromophore?
- 8 Define the term disinfectant. Mention any two antibiotics.
- 9 Differentiate mass percentage and volume percentage.
- 10 What is meant by an ideal solution? Give one example.

SECTION - B (25 Marks)

Answer ALL Questions

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

- II a What is an Error? What are its types? How will you minimize them?

OR

b- Explain the principles of volumetric analysis.

- 12 a Explain in detail the different types of chemical bonding.

OR

* b Explain the geometry and shapes of SF_6 and PCl_5 molecules.

- 13 a What are carbohydrates? How they are classified?

OR

b Discuss the isolation and uses of Geraniol.

- 14 a Explain chromophores and Auxochromes with suitable examples.

OR

b Explain the preparation and uses of methyl orange and Alizarin.

- 15 a State Carnot theorem. Explain thermodynamic scale of temperature.

OR

b Discuss Carnot cycle in detail.

SECTION - C (30 Marks)

Answer any THREE Questions

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

- 16 a Explain Volhard's method of precipitation titration.

• b What is indicators? How phenolphthalein act as indicator?

- 17 Write note on the following:

a VSEPR theory b) Electronic concept c) vander waals force.

- 18 Explain the preparation properties and uses of the following :

a Teflon b) Polythene, c) Piperine

- 19 a' What are dyes? How they are classified based on their chemical structure?

b What are transmittance? Give examples.

- 20 a Explain any two statements of second law of thermodynamics,

b Write note on Carnot theorem and Carnot cycle.