PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)
BSc DEGREE EXAMINATION MAY 2018
(Fifth Semester)

Branch – **CHEMISTRY**

ORGANIC 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 Human beings can digest starch but not cellulose. Explain.
2 Write the open chain structures of glucose and fructose.
3 State isoprene rule.
4 Write the structures of Nicotine and α -pinene.
5 Give an example for nitro- acinitro tautomerism.
6 What are the active methylene compounds? Give examples.
7 Why nucleophilic reagents readily attack carbonyl group?
8 Illustrate Knoevenegal reaction with example.
9 Write two examples for azo dyes.
10 Give the preparation for Phenolphthalein

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

11 a Explain the reactions of glucose and fructose with phenyl hydrazine.
OR
b Discuss any five evidences for the ring structure of glucose.

12 a Explain the classification of Terpenes.
OR
b Describe the synthesis of menthol.

13 a Explain the acid and base catalyzed mechanisms of Keto-enol tautomerism.
OR
b Explain any five uses of malonic ester.

14 a Discuss the mechanism of Gomberg-Bachmann reaction.
OR
b Write a brief account of the reactivity of carbonyl group.

15 a Discuss the valence bond theory for color and constitution.
OR
b What are vat dyes? How is fluoresce in prepared?

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

16 Elucidate the structure of Glucose.

17 Elucidate the structure of Ascorbic acid.

18 a) Write briefly on amido-imido tautomerism. (5)
b) Discuss any five typical reactions of active methylene group. (5)

19 a) Explain he mechanisms of Perkin and Reformatsky reactions. (5)
b) Discuss the detection and stability of free radicals. (5)

20 a) Explain the classification of dyes based on the mode of application. (5)
b) How is Bismarck brown and anthraquinone dyes prepared? (5)