

Course Code: 1BSC3

Course: Chemistry-I

Credit: 4

Last Submission Date: April 30 (for January Session)

October 31, (for July session)

Max. Marks:-30

Min. Marks:-10

Note:-attempt all questions.

Que.1 Explain the dual nature properties of matter.

Que.2 Explain VSEPR theory to  $df^3$  and  $sf^4$ .

Que.3 Explain the lattice defects.

Que.4 Discuss molecular theory for homonuclear and heteronuclear (WSNO) diatomic molecules.

Que.5 What is the alkalimeter and alkali earth metal elements explain with example.

Que.6 Write short notes on-:

(1) Silicates

(2) Interhalogens

Que.7 Explain the aromaticity character of organic compound.

Que.8 Discuss the Friedel-Crafts reaction and Birch reduction

Que.9 Explain the  $SN_1$  and  $SN_2$  reactions with energy profile diagrams.

Que.10 Briefly explain with the example of Diels-Alder reaction?