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BG—23—2016

FACULTY OF SCIENCE

B.Sc. (BT) (First Semester) EXAMINATION

OCTOBER/NOVEMBER, 2016

(CBCS Pattern)

BIOTECHNOLOGY

(Fundamentals of Chemistry)

(Friday, 25-11-2016)

Time : 10.00 a.m. to 1.00 p.m.

Time—3 Hours

Maximum Marks—40

N.B. :— (i) All questions are compulsory.

(ii) All questions carry equal marks.

(iii) Draw a neat well labelled diagram wherever necessary.

1. Describe in detail Bohr's Atomic model. 8

Or

(a) Explain factors affecting ionization energy. 4

(b) Describe in brief Planck's quantum theory. 4

2. Define chemical bond. Describe in detail types of chemical bond. 8

Or

(a) Explain VSEPR theory. 4

(b) Discuss in detail bond length, bond angle and bond energy. 4

3. Describe in detail Ionic equilibrium in solution. 8

Or

(a) Explain common ion effect. 4

(b) Discuss concept and theories of Acid and Base. 4

P.T.O.

4. Describe in detail first and second order kinetics. 8
- Or*
- (a) Explain Hess law. 4
- (b) Give a detailed account of reversible and irreversible processes. 4
5. Write short notes on (any *two*) : 8
- (a) Atomic size
- (b) Hydrogen bonding
- (c) pH
- (d) Enthalpy
- (e) Free energy.