

Roll No.

21201

B. Sc. (Pass Course) 2nd Sem.

Examination – May, 2019

CHEMISTRY - I (INORGANIC CHEMISTRY)

Paper : CII-201

Time : Three hours]

[Maximum Marks : 30

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note : Attempt any *five* questions in all, selecting *one* question from each Unit. Question No. 1 is *compulsory*. All questions carry equal marks.

1. **Compulsory question :** 1 × 6 = 6

- (a) Explain why p-nitro phenol has higher boiling point than o-nitro phenol ?
- (b) How p- and n-type semiconductors are prepared ?
- (c) Why KOH is a stronger base than Ba(OH)₂ ?
- (d) Xe is known to form some compounds but not He and Ar ? Explain.

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- (e) Draw the structure of diborane.
- (f) Sketch the structure of white, red and black phosphorus.

UNIT – I

- 2. (a) What are Vander Waal's forces ? How are they helpful in explaining the properties of noble gases ?
- (b) Explain briefly the band theory of metals. 3 × 2 = 6
- 3. (a) What kind of forces must be overcome to boil water ? Explain.
- (b) Give the role of semiconductor in photovoltaic cell. 3 × 2 = 6

UNIT – II

- 4. (a) Draw the structure of chlorophyll and explain its function in biosystem.
- (b) Discuss the factors which led to late discovery of noble gas. 3 × 2 = 6
- 5. (a) Discuss the diagonal relationship between Li and Mg.
- (b) XeF₆ is a distorted molecule. Why ? 3 × 2 = 6

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