PSG COLLEGE OF ARTS & SCIENCE (AUTONOMOUS)

MSc DEGREE EXAMINATION DECEMBER 2018

(Third Semester)

Branch-CHEMISTRY

INORGANIC CHEMSTRY - III

Answer ALL questions (5 x 15 = 75) 1 a Describe the structure of zine blende. (5) b How are X-rays generated? (4) c Discuss the principles of electron diffraction. How is it useful for structural elucidation of compounds? (6) OR 0 d Discuss briefly the application of X-ray diffraction. (5) e Discuss briefly the structure of graphite. (4) f Discuss briefly the structure and applications of neutron diffraction in the structural elucidation of compounds. (6) 2 a Discuss briefly the structure and applications of metal cluster compounds with suitable examples. (7) b Explain briefly the importance of Hume-Rothery ratio. (4) c What are semiconductors? How are they classified? Explain them. (4) d Discuss briefly the band theory on solids. (7) e What are crystal defects? How are they classified? Explain Schotsky and Frenkel defects. (6) f What is metallic bond? Give one example. (2) 3 a Discuss in details the Meson field theory. (5) e Discuss in details the Meson field theory. (5) d Explain the Liquid drop model and its importance. (5) e What is atomic mass? How is it measures? (5)	Ti	me	e : Three Hours Maximum : 75 Marks	
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f What is a nuclear reactor? Mention their types. Explain them. (6)		f		1.1