



**THE ANSWERS MUST BE ATTEMPTED ON THE ANSWER SHEET PROVIDED**

**Q.1. Answer the following short questions: (15x2=30)**

- (i) How CFT is superior to VBT?
- (ii) How radiations can be measured?
- (iii) What are the raw materials of soap industry?
- (iv) How colour is imparted to Glass during its manufacturing process.
- (v) What is soda ash?
- (vi) What is carbon dating?
- (vii) What are the ores of copper from which it is extracted?
- (viii) What is the shape of SF<sub>4</sub> according to VSEPR theory?
- (ix) What is the example of linkage isomerism?
- (x) What are the applications of coordination compounds in industry?
- (xi) What are the biological effects of nuclear radiations?
- (xii) What are chelates?
- (xiii) Explain diagonal relationship of Li and Mg.
- (xiv) O<sub>2</sub> molecule is paramagnetic in nature. Justify the statement.
- (xv) What are the main defects of VESPR theory?

**Q.2. Answer the following questions: (3X10=30)**

- (i) Explain the structures of Ni(CO)<sub>4</sub> and [Ni(CN)<sub>4</sub>]<sup>2-</sup> complexes on the basis of VBT. theory?
- (ii) How electronegativity can be measured by different methods?
- (iii) What is the role of isomerization in coordination chemistry?