



THE ANSWERS MUST BE ATTEMPTED ON THE ANSWER SHEET PROVIDED

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

- i. Discuss the solubility of EDTA in water?
- ii. Brief the role of organic reagents as masking agents?
- iii. Discuss one experimental evidence for $d\pi - p\pi$.
- iv. What is $p\pi - p\pi$ bonding? Give example
- v. What is a 3 center – 4 electron bond?
- vi. Why does Fluorine show peculiar behavior in group VIIA?
- vii. What is an s – inert pair effect?
- viii. What kind of a buffer is used in EDTA titrations?
- ix. Write structural formula of a titrant other than EDTA.
- x. Brief acid base indicators.
- xi. Why NF_5 does not exist?
- xii. What is Diagonal relationship? Give example.
- xiii. Mention two points of similarity between VBT and MOT?
- xiv. What is the range of UV and VIS light/radiation?
- xv. Give two uses of 8-hydroxyquinoline in inorganic analysis

Q.2. Answer the following questions. (3x10=30)

- i. Discuss periodic anomalies of non-metals and post transition metals. (10)
- ii. Discuss some methods used to increase the specificity of an organic reagent. (10)
- iii. a) Write a brief note on Directed Valence Theory. (05)
b) Briefly discuss stereochemistry few examples. (05)