

Roll No.

78057-N

**M. Sc. (Chemistry) 4th Semester
Examination – December, 2014
INORGANIC SPECIAL-VI (NEW)**

Paper : CH-506XVI

Time : Three hours]

[Maximum Marks : 80

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 : Question No. 1 is *compulsory*. Attempt *five* questions in all, selecting *one* question from each Section (A-D).

1. Answer the following in short : 2 each

- How the deficiency of copper is recovered in human beings ?
- Name the diseases for which gold therapy is most commonly used ?
- What are the effects of lead on our environment ?
- How the content of selenium affects the human body ?

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- (e) What do you understand by therapeutic index ?
- (f) Name some macrocyclic ligands act as antibiotics ?
- (g) What do you mean by biomineralisation ?
- (h) What are the radioisotope of gallium and indium ?

SECTION - A

- (a) How zinc play vital role in tumor growth and inhibition ? 8
- (b) Discuss in brief the metal complexes used as antibacterial agent ? 8
- (a) Discuss the mechanism of anticancer activity of platinum complexes ? What are the side effects of platinum complexes ? 10
- (b) Write an explanatory note on polyethylene amines as chelating drugs ? 6

SECTION - B

4. (a) How the heavy metals induced toxicity and discuss the diseases that appear due to their toxicity ? 8
- (b) Discuss some biological role of selenium including its toxicity and essentiality ? 8
5. (a) What are the metabolic disorder that arises due to imbalance of alkali and alkaline earth metals and how they are cured ? 8

- (b) What are the uses of iodine as trace element ? How these are useful to treat Hypo and Hyperactivity of thyroids ? 8

SECTION - C

6. Write a short note on the following : 8 each
- (a) Aspirin chelation
- (b) Carcinogen and carcinostatic ligand
7. (a) How ligands interferes with Metallo-enzymes ? 8
- (b) Discuss some alkylating agent used as anticancer agent ? 8

SECTION - D

8. (a) What are antioxidant and discuss their harmful effects ? 8
- (b) Discuss the diseases that arises due to deficiency of vitamin-D and how they can be cured ? 8
9. Write a note on the following radioisotope : 8 each
- (a) Iodine-131
- (b) Technetium-99m