Roll No. ....

(05/16-I)

5252

B. Sc. EXAMINATION

(Sixth Semester)

CHEMISTRY (INORGANIC)

Paper XVIII (CH-304)

Time : Three Hours *Maximum Marks : 27*

Note : Attempt *Five* questions in all. Question number 1 (7 questions of 1 mark each) is compulsory. In addition to question no. 1, candidate are required to attempt *two* questions from each Section A and B.

(a) What is organometallic compound ?

(b) Give the IUPAC names of $Fe(CO)_5$ and $Fe_2(CO)_4(C_5H_5)_2$.

(c) What is ionisation constant ?

(d) Why is ammonia termed as a base through it does no containt OH^- ions ?

(e) What are nitrogenases ?

(f) What is the role of iodine in human body ?

(g) What are silicon fluids ? $1 \times 7 = 7$

Section A

2. (a) What is Zeise salt and how is it prepared ? Discuss the nature of bond in this compound. 3

(b) How does Wilkinson's catalyst play its role in hydrogenation of alkenes ? 2

3. (a) Define acids and bases in term of Lux-flood concept. Give its advantages. 3

(b) Justify by Lewis concept that CO_2 is an acid. 2

4. (a) Which factros are responsible for kinetic instability of transition metal sigma bonded organometallic compounds ? 3

(b) Describe the application of HSAB principle. 2

Section B

5. What are metalloporphyrins ? Explain the structure of hemoglobin and mycglobin. 5

6. (a) Discuss biological importance of Ca^{2+} ? How does it differ from the Mg^{2+} ? 3

(b) Discuss important properties of Silicon. 2

7. (a) Discuss the structure of $(NPCl_2)$ and $(NPCl_2)_3$. 3

(b) Write brief notes on the following : 2

(i) Silicon resins

(ii) Silicon rubber.