

Quadrant IV - Assessment

Programme: Bachelor of Science (Third Year)

Subject: Chemistry

Paper Code: CHC - 109

Paper Title: Inorganic chemistry (Section A)

Unit: Organometallic Chemistry

Module Name: Definition and Nomenclature of Organometallic Compounds

Module No: 1

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Q.1 Give IUPAC names of the following:

- i) $(\text{C}_6\text{H}_6) \text{Cr} (\text{CO})_3$
- ii) $\text{Fe} (\text{C}_5\text{H}_5)_2$
- iii) $(\sigma - \text{C}_5\text{H}_5)_2 \text{Ti} (\pi - \text{C}_5\text{H}_5)_2$
- iv) $\text{ReH} ((\pi - \text{C}_5\text{H}_5))$
- v) $\text{Ni} (\pi - \text{C}_5\text{H}_5)_2$
- vi) $\text{Ru} (\text{CO})_3 (\text{C}_4\text{H}_6)$

Q. 2 Write formulae for the following organometallic compounds

- i) $(\eta^3 - \text{allyl}) \text{tricarbonyl cobalt}$
- ii) $(\eta^1 - \text{allyl}) \text{tricarbonyl } (\eta^5 - \text{cyclopentadienyl}) \text{molybdenum}$
- iii) $\text{Bis } (\eta^5 - \text{cyclopentadienyl}) \text{ iron}$

Q. 3 Answer the following questions

- a) Define organometallic compounds.

b) What are π bonded organometallic compounds?