



TEST PAPER: CHEMISTRY

Time: 75 Minutes

Class: ISC/CBSE 12th

Max. Marks: 30 Marks

Date: 23rd January, 2019

Marking Scheme: Questions carry 10 marks each. Questions have 3 subparts each. Subparts (a) and (b) carry 3 marks each and subpart (c) carries 4 marks.

Question: 1

- A. What happens when D-glucose is treated with following reagents?
HI, HNO₃, bromine water
- B. Give reasons for the following:
- Aniline does not undergo Friedal Crafts reaction.
 - Anisole undergoes electrophilic substitution reactions.
 - Grignard reagent should be prepared under anhydrous conditions.
- C. Explain the nature of bonding in following complexes on the basis of valence bond theory:
[Fe (CN)₆]²⁺, [Co(en)₃]³⁺, [CoF₆]³⁻, [NiCl₄]²⁻

Question: 2

- A. Write the formulae of following complexes whose IUPAC names are given:
- tetrabromidocuprate (II)
 - pentaamminenitrito-O-cobalt (III)
 - tris(ethane1,2-diammine)chromium (III) chloride
- B. Explain the splitting of d-orbitals in octahedral crystal field with the help of diagram. What is crystal field splitting energy?
- C. Give the following equations:
- Riemann-Tiemann reaction
 - Wurtz reaction (2-bromobutane)
 - Cannizaro reaction (benzaldehyde)
 - Hofmann-bromamide reaction (Butanamide)

Question: 3

- A. Explain hydroboration-oxidation of propene with mechanism.
- B. Name the reagents involved in following conversions :(any 3)
- Toulene to benzaldehyde
 - Propene to 2-propanol
 - Benzyl alcohol to benzoic acid
 - Acetophenone to benzoic acid
- C. Give the reactions for the following conversions;
- benzene to m-Nitroacetophenone
 - aniline to benzyl alcohol
 - nitrobenzene to benzoic acid
 - bromoethane to propanone