S.NO. 309 (R) BATCH: 2003 – 2014, 2017 Reg. No. 72

END OF SEMESTER EXAMINATIONS, NOVEMBER - 2018
CHEMISTRY
SUBJECT CODE: 17UBCH02

MAJOR: B.Sc. (Physics) **SEMESTER : III**
TIME : 3 HOURS **MAX. MARKS: 75**

SECTION – A (10 X 1 = 10)

Answer ALL the Questions:

1. State Pauli Exclusion Principle.
2. State Aufbau principle.
3. Name following coordination compounds i) $[PtCl_4]^{2-}$ ii) $K_4[Fe(CN)_6]$.
4. Give an example for Bidentate ligand.
5. Mention any two uses of Benzene.
6. High light any two properties of cyclo alkane.
7. Define Equivalent conductance.
8. What is meant by standard electrode?
9. Give the composition of glass.
10. What is sedimentation?

SECTION – B (5 X 4 = 20)

Answer ALL the Questions:

11. a) Explain Bohr-Sommerfield theory.
    (OR)
    b) Explain VSEPR theory with the help of water molecule.
12. a) Explain the highlights of VB theory.
    (OR)
    b) Write a note on Medical uses of coordination compounds.
13. a) Discuss Haworth Synthesis of napthalene.
    (OR)
    b) Explain substitution reaction of cyclo alkanes.
14. a) Derive Nernst equation.
    (OR)
    b) Compare and Contrast reversible and irreversible cell.
15. a) Explain the classification of detergents.
    (OR)
    b) Mention the uses of all types of glass.

SECTION – C (5 X 9 = 45)

Answer ALL the Questions:

16. a) Discuss Resonance theory of metallic bond.
    (OR)
    b) How were Davisson and Germer experiments helpful to predict the wave nature of light or an electron?
17. a) Explain chelation with the help of EDTA ligand.
    (OR)
    b) Explain Werner's theory of coordination compounds.
18. a) Discuss Huckel's rule of Aromaticity.
    (OR)
    b) Explain the mechanism of Dickmann condensation.
19. a) Discuss the conductometric titration of Strong Acid Vs Strong Base.
    (OR)
    b) Highlights the significance of Electrochemical series.
20. a) Explain the manufacture of soap by continuous hot process.
    (OR)
    b) (i) What is meant by demineralisation of water?
    (ii) Explain the ion-exchange process of demineralisataion.

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