CLASS-F.Y.B.Sc

SEMESTER II

Chemistry -II

PHYSICAL CHEMISTRY (UNIT-I)

1) Fluorescence starts as soon as matter is exposed to…….
A Air
B Water
C Radiation
D Particle

2) What will be the Miller indices of the faces having intercept, 2a: 3b: 3c?
A (322)
B (223)
C (232)
D (332)

3) What will be the pH of NaOH? When the concentration of hydroxide ion(OH^-) is 0.02M.
A 7.5
B 12.3
C 9.5
D 6.2

4) Statement A: Radio waves are longest wavelength radiation.

Statement B: Rotational transition is not occurs in ultra violet region.
A Statement A is True and Statement B is False
B Statement A is False and Statement B is True
C Both Statement A and B are True
D Both Statement A and B are False

5) Basic Buffer among the following is……..
A NH_4OH / HCl
B CH_3COOH / CH_3COONa
C CH_3COOH / HCl
D NH_4OH / NH_4Cl

INORGANIC CHEMISTRY (UNIT-II)

1. The bond angle in PX_3 gets reduced with
    a) With increase in the electronegativity of the halogen
    b) With decrease in the electronegativity of the halogen
    c) Without any effect on the electronegativity of the halogen
    d) With increase in the atomic size of the halogen
2. The steric number of SF_6 is ---------- and the structure is ----------
    a) 5, Trigonal Bipyramidal
    b) 6, Octahedral
    c) 3. Planar Trigonal
    d) 4, Tetrahedral
3. CO_2 is isoelectronic with----------
    a) NO_2^-
    b) IF_2
    c) XeF_2
    d) SO_2
4. The potential of the redox system Ce^{4+}/Fe^{2+} when $5cm^3$ of 0.1N Fe^{2+} solution is added to $10cm^3$ of 0.1N Ce^{4+} solution is ----------
    a) 0.715 V
    b) 0.771 V
    c) 0.889 V
    d) 0.749 V
5. A graphical plot of Volt equivalents (n E) OR free energy Vs oxidation state of a chemical species is called ---------- diagram
    a) Frost
    b) Latimer
    c) Walsh
    d) pH

ORGANIC CHEMISTRY (UNIT III)

1) Naphthalene is aromatic because it has (4n + 2) πelectrons, where n= ……..

A 0
B 1
C 2
D 3

2) Halogenation of benzene is a ……. substitution, and the attacking agent is ……..

A nucleophilic; Cl^+
B electrophilic; Cl^+
C nucleophilic; Cl^-
D electrophilic; Cl^-

3) The –OH in phenols is a …….. directing group with respect to electrophilic substitution .

A deactivating, ortho-para
B deactivating, meta
C activating, meta
D activating, ortho-para

4) Torsional strain is also called ……. strain.

A van Der waal
B Baeyer
C Transannular
D Pitzer

5) ……. has the highest angle strain.

A Cyclopropane
B Cyclobutane
C Cyclopentane
D Cyclohexane