



## Home Assignment - II

Class - XII CBSE (Maths/Bio)

### Chemistry

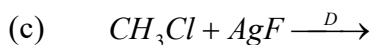
#### Part - I

- Oxidation number of  $Fe$  in  $K_4[Fe(CN)_6]$  is .....
- The co-ordination number of  $(EDTA)^{4-}$  is .....
- A complex which is formed by chloro and Nitrato ligands gives two moles of precipitate of  $AgCl$  with  $AgNO_3$ . Its formula will be
  - $[Co(NH_3)_5NO_3]Cl_2$
  - $[Co(NH_3)_5Cl]NO_3Cl$
  - $[Co(NH_3)_5Cl]NO_3$
  - None of these
- Write oxidation number and co-ordination number of central metal atom in complex  $K_3[Fe(C_2O_4)_3]$
- Two complexes having molecular formula  $Co(NH_3)_5SO_4 Br$  are taken in the two bottles A and B. One complex will give white ppt with  $BaCl_2$  and other light yellow ppt with  $AgNO_3$ . Calculate the molecular formula of complexes A and B.
- Write the IUPAC name of the following complexes -
  - $[Pt(NH_3)_2Cl(NO_2)]$
  - $Na[BH_4]$
  - $[Co(NH_3)_5CO_3]Cl$
  - $Zn_2[Fe(CN)_6]$
  - $Hg[Co(SCN)_4]$
  - $[Pt(Py)_4][PtCl_4]$
  - $Na[PtBrCl(NO_2)(NH_3)]$
  - $\left[ (H_2O)_4Co \begin{array}{c} \diagup NH_2 \\ \diagdown NO_2 \end{array} Co(NH_3)_4 \right] Cl_4$

#### Part - II

- Write the complete name of D.D.T. and chemical reaction for preparation of it ?
- Write complete name and IUPAC name of B.H.C. and chemical reaction to prepare it.
- Write a short notes on -
  - Finkelstein Reaction
  - Swarts Reaction
- What do you mean by decarboxylative-bromination reaction also write its name and chemical reaction as a example ?
- Explain ullmann reaction with a chemical reaction ?
- Explain Carbylamine reaction or Isocyanide test with an example. Write also its mechanism ? How you will distinguish difference between Methyl amine and Dimethyl amine on the basis of this test.
- Complete the following reaction -





8. Define Freons ? Explain the nomenclature of freons with any two example ?
9. Explain Darzen's Reaction with an example ?
10. Write reason for the banned of D.D.T. in USA. Explain ?

### Physics

1. Does the charge given to a metallic sphere depend on whether it is hollow or solid ? Give reason for your answer.
2. How does the electric flux due to a point charge enclosed by a spherical gaussian surface get affected when its radius is increased ?
3. A charge  $Q$  is placed at the centre of a cube. What would be the flux through one face ?
4. What orientation of electric dipole in uniform electric field corresponds to its (i) stable (ii) unstable equilibrium ?
5. Define electric dipole moment. Is it a scalar or vector quantity ? what are its S.I. unit ?
6. Define electric flux write its S.I. unit.
7. A spherical rubber balloon carries a charge that is uniformly distributed over its surface. As the balloon up and increases in size, how does the total electric flux coming out of the surface change ? Give the reason ?
8. Find expression for force and torque on an electric dipole kept in uniform electric field.
9. Find an expression for electric field intensity at a point on the axial line of electric dipole.
10. Derive an expression for electric field due to an electric dipole on its equatorial line.
11. A charge is distributed uniformly over a ring of radius 'R' obtain an expression for electric field intensity 'E' at a point on the axis of the ring.
12. Using Gauss's theorem show mathematically that for any point outside the shell, the field due to uniformly charged spherical shell, is concentrated at the centre.
13. Using Gauss's law, prove that the electric field at a point due to uniformly charged infinite plane sheet is independent of the distance from it. How is the field directed if (i) the sheet is positively charged (ii) negatively charged ?
14. Two charges of magnitude  $-2Q$  and  $+Q$  are located at a point  $(a,0)$  and  $(4a,0)$  respectively. What is the electric flux due to these charges through a sphere of radius '3a' with its centre at the origin ?
15. Two insulated charged copper spheres A and B of identical size have charges  $q_A$  and  $-3q_A$  respectively then they are brought in contact with each other and then separated, what are the new charge on them ?

### Maths

Chapter - 2 Inverse Trig. Functions  
Chapter - 3 Matrices  
Chapter - 5 Continuity and Differentiation  
Chapter - 13 Probability

### Physical Education

1. Define Asanas ?
2. What is diabetes ?
3. Define hypertension.
4. Mention two benefit of Tadasana.
5. Define obesity.
6. Name three Asanas that help in preventing obesity.
7. Explain the technique of performing Bhujangasana, its benefits and contraindications.
8. Explain the benefits, contraindications and technique of performing the following Asanas :-
  - i. Paschimottanasana
  - ii. Pawanuktasana

## English

### Short Answer Type Questions :-

1. Where was the poet driving to and who was with her ?
2. Describe the face of the poet's mother. Why is it compared to a corpse ?
3. Describe the world inside the car and compare it to the activities taking place outside.
4. Why are 'young' trees described as sprinting ? Do they not provide a contrast to the 'dozing' old lady sitting inside ?
5. Why has the poet given the image of the merry children 'spilling' out of their homes ?
6. What is the familiar ache and why does it return ?
7. Why is the poet's mother compared to the late winter's moon ?
8. Why does the poet smile and what does she say while saying goodbye to her mother ?
9. What does the poet see happening outside ?
10. What does the poet do after the security check-up ? What does she notice ?

## Biology

(Chapter - 1 & 2)

1. Asexual reproduction by zoospores is observed in -  
(i) Penicillium (ii) Hydra  
(iii) Sponge (iv) Chlamydomonas
2. Cleistogamous flowers are self-pollinated because -  
(i) They are bisexual which do not open at all.  
(ii) They are bisexual and open flower.  
(iii) They are uni sexual  
(iv) Their stigma matures before the anther dehisces.
3. In Bryophyllum, Vegetative propagation done by -  
(i) Root (ii) Stem (iii) Leaf (iv) Bulbil
4. Identify the part of a flower and write whether it is haploid or diploid (2n).  
(i) Ovary .....  
(ii) Anther .....  
(iii) Egg .....  
(iv) Pollen .....  
(v) Male gamete .....  
(vi) Zygote .....
5. (a) Differentiate between a Zoospore and zygote.  
(b) Differentiate between gametogenesis and embryogenesis.
6. Why are oviparous animals at a greater risk as compared to offspring of viviparous animals ?
7. Define -  
i. Juvenile phase  
ii. Reproductive phase  
iii. Senescent phase
8. What is a bisexual flower ? Write local names and scientific names of flowering plants.
9. Draw the structure of any three fruits and show seeds(s) and pericarp(p).
10. Why are maize and cucurbita called as monoecious plants ? Write two examples of bisexual flowers and two examples of unisexual flower plants.
11. When and where Tapetum and Synergids develop in flowering plants ? Mention their functions.
12. Where are the following structures present in a male gametophyte of an angiosperm ? Mention the function of each one of them -  
(i) Germ Pore (ii) Sporopollenin (iii) Generative cell
13. What does pollen allergy mean ? Write names of any two plants that produce pollen allergy by its pollen grain.
14. What is pollen viability ? Write names of any two plants in which pollen viability is 30 minutes; write any two families whose plants have pollen viability about few months. on which temperature pollen

- grains are preserve for long duration in pallen bank ?
15. Explain the development of male gametsphyte by the help of sketch. Write the number of cells present in the pallen tube in the style before fertilisation.
  16. What is number of pollen sacs in the dithecous anther explain the T.S. of dithecous anther to show the microspore tetrad in the sporogenaous tissue.
  17. Draw the structure of Maize plant to show the position of both male and female flower in it.
  18. Define the following terms :-
    - (i) Microsporogenesis      (ii) Megasporogeneris      (iii) Nucellus
    - (iv) Integument              (v) Hilum
  19. Draw the structure of anatropous ovule and write the number of cells and nuclei in the embryosac.
  20. Write the names of types of ovules in flowering plants. which type ovule found in family cactaceae. Which ovule is found about 82% family; which type of ovule present in pea and gram ?

Note :-

*All the students are hereby informed that your Assignment - II should be submitted on or before **05 June 2020** on Whats App number of your subject teacher.*

