



## HOLIDAY HOMEWORK - XII

### ENGLISH

Make a project on on classified and display advertisement on following points

1. types (with one example of each)
2. Function

Also provide the detail why do we need a classified advertisement And how it differs from display advertisement?

### CHEMISTRY

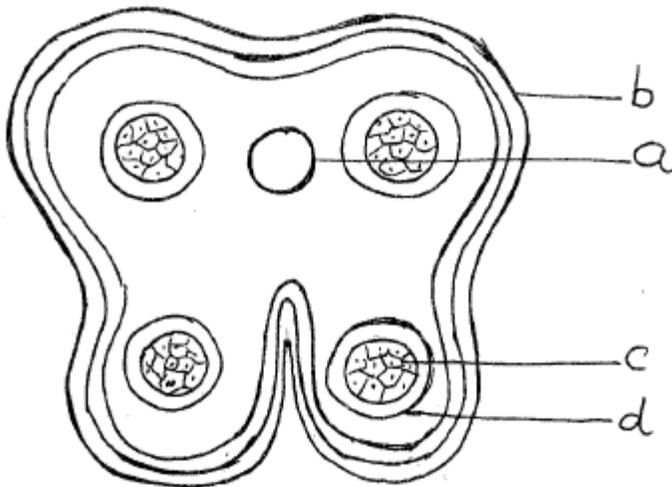
- Q1 Determine the mass of sulphuric acid to prepare 250ml of 0.04M aqueous solution.
2. (a) write the definition of molality and mole fraction.  
(b) Derive the relation between molality and mole fraction for aqueous solution.
3. What is Henry law. What does the slope of graph drawn between mole-fraction and pressure ?
4. Calculate the value of Henry's law constant if solubility of H<sub>2</sub>S in water is 0.195m at STP.
5. what is Rault's law? Why do the some solutions don't follow this law?
6. what is osmosis and osmotic pressure? Why it is preferred in dertermination of molecular mass of macro molecule?
7. Determine the osmotic pressure of 95%Na<sub>2</sub>SO<sub>4</sub>aqueous solution at 27<sup>0</sup>c .Given R=0.0821Latm/mol/K
8. What is abnormal molecular mass?What is reason of abnormality in the value of molecular mass?
9. Define Van't Hoff factor. What is the value of Vant Hoff factor when  
(i)dissociation of solute take place (ii)neither dissociation nor association take place and (iii) association of solute take place.
10. How does solubility of solid is affected with change of temperature.

# BIOLOGY

Give one example of a plant that reproduces by

- (i) runner      (ii) offset

2. Coconut palm is monoecious , while date palm is dioecious .why are they so called?
3. Draw a diagram of a section of a megasporangium of an angiosperm and label its parts.
4. (i) Describe the sequence of the process of microsporogenesis in angiosperms.  
(ii) Draw a labelled diagram of a 2-celled final structure formed.
5. Flowering plants have developed many devices to discourage self-pollination and encourage cross pollination . Explain these devices briefly.
6. In the TS of a mature anther given below, label the parts (a) to (d) and mention important function of each.



7. Explain the following giving reasons
  - (a) Pollen grains are well-preserved as fossils.
  - (b) Pollen tablets are in use of people these days..
8. Why is fertilization in an angiosperm referred to as double fertilization? Mention the ploidy of the cells involved.
9. Give reasons .Why?
  - (i) Most zygotes in angiosperms divide only after certain amount of endosperm is formed.
  - (ii) Groundnut seeds are exalbuminous and castor seeds are albuminous.
  - (iii) why are seeds of some grasses called apomictic ?
10. Describe the structure of monocot embryo with a neat labeled diagram.

# PHYSICS

1. What is coulomb's law? Derive it in vector form. Also, define relative electrical permittivity.
2. Find an expression for forces between multiple charges and write the principle of superposition.
3. a.) How much positive and negative charges are there in a cup of water if the cup contains 250 cc of water?  
b.) If a body gives out  $10^9$  electrons every second, how much time is required to get a total charge of 1C from it?
4. Define these terms:-
  - a.) Electric field lines
  - b.) Electric field intensity
  - c.) Dipole moment
  - d.) Quantization of electric charge
5. Find the electric field intensity on
  - a.) Axial line of electric dipole
  - b.) Equatorial line of electric dipole
6. Find the expression of electric dipole in a uniform two dimensional electric field and thus find the expression of maximum value of torque.
7. An electron falls through a distance of 1.5 cm in a uniform electric field of value  $2 \times 10^4$  N/C when the direction of electric field is reversed, a proton falls through the same distance. Compare the time of fall in each case. Contrast the situation with that of free fall under gravity.
8. What is Gauss's theorem? Derive its expression. Apply Gauss's theorem to find:-
  - a.) electric field intensity due to an infinitely long straight uniformly charged wire
  - b.) electric field intensity due to a thin infinite plane sheet of charge
  - c.) electric field intensity due to a uniformly charged spherical cell
9. An infinite line charge produces a field of  $19 \times 10^4$  NC<sup>-1</sup> at a distance of 5 cm. Calculate the linear charge density.
10. A uniformly charged conducting sphere of 2.4 m diameter has a surface charge density of  $180 \mu\text{C}/\text{m}^2$  :-
  - a.) Find the charge on the sphere.
  - b.) What is the total flux living out the surface of the sphere?
11. Complete practical record, activity and investigatory project as prescribed in syllabus.

## COMPUTER SCIENCE

1. Write any 10 programs using C++ on the following areas in the practical lab manual with output.
  - Arrays 1D & 2D → ( any three)
  - Functions → (any two)
  - Looping (for , nested for) & Conditional ( If-else , nested if) → (any three)
  - One Fibonacci series and one prime numbers.

## HEALTH AND PHYSICAL EDUCATION

1. Discuss about knock out cum league and league cum knock out methods..
2. Discuss the objectives of extramural in detail.
3. Make some fixtures with statements...
4. Knock out cum knock out -- (1) 31 teams (2) 28 teams
5. Knock out cum league - (1) 15 teams (2) 11 teams
6. League com knock out --- (1) 9 teams (2) 7 teams
7. League cum league ---- (1) 6 teams (2) 8 teams
8. Make a interschool tournament committee chart and put all the duties of that committee on chart paper.
9. Write something about basket ball game on stick file a4 size paper.