

GURU GOBIND SINGH PUBLIC SCHOOL
SECTOR – V, B.S.CITY

Half Yearly Revision Assignment

Class: X

Subject: - Chemistry

Level: - II

1. (a) Why do we apply paint on an iron articles?
(b) Oil and fat containing food items are flushed with nitrogen. Why?
2. What is the difference between displacement and double displacement reactions? Write the balanced chemical equations for these?
3. Give suitable reasons for the following:-
 - (a) We feel burning sensation when we overeat.
 - (b) The crystals of washing soda change to white powder on exposure to air?
 - (c) An aqueous solution of sodium chloride is neutral but an aqueous solution of sodium carbonate is basic.
4. A baker found that he cake prepared by him is hard and small in size. Which ingredient do you think that he might have forgotten to add that would have caused the cake to rise and become light? Give reason.
5. With the help of labeled diagram, explain the process of electrolytic refining of copper.
6. Compare the properties of a typical metal and a non-metal on the basis of the following :-
 - (a) Nature of Oxide
 - (b) Conductivity
7. What is thermite reaction? Illustrate with the balanced chemical equation. Write any application of the reaction.
8. What is homologous series of carbon compounds? List its any two characteristics. Write the name and formula of next higher homologue of HCOOH.
9. Give the structural formula each of (i) Open Chain (ii) Branched chain and (iii) Ring compound
10. Write the electron-dot structure of :-
 - (a) CO₂
 - (b) C₅H₁₀
 - (c) C₂H₂
 - (d) H₂S

① Electricity

- (1) what is electric potential? (write a notes of on electric potential and potential difference in at least 70 to 80 words)
- (2) write notes on conductors, non conductors (insulators) and semiconductor (At least 50 words)
- (3) what is Ohm's law? Explain an activity to prove it? (At least 40 and 40 words)
- (4) what is resistance, Equivalent resistance? what are the types of combination of resistance? Find equivalent resistance in series combination and parallel combination?
- (5) why are the coil of electric toasters and electric irons made of an alloy?
- (2) Magnetic effect of electric current.
- (1) what is magnetic field and field lines? write at least 4 properties of magnetic field lines?
- (2) Draw figure of magnetic field lines :-
 (a) due to current through a straight conductor
 (b) due to current through a circular loop.
- (3) what is solenoid? what is electromagnet? what are the factors affecting electromagnet?
- (4) what is Fleming's left hand rule? (30-40 words with figure) write its application
- (5) what is Fleming's right hand rule (30-40 words with figure), where is it applied?
 Say difference between motor and generator?

(2) Source of energy

- (1) What is energy, fossil, fossil fuel? Define them.
- (2) What are the characteristics of ideal fuel? Explain exhaustible and non-exhaustible sources of energy?
- (3) Draw a neat and clear diagram of a biogas plant, name its parts and how does it work?
- (4) What is solar energy, wind energy and limitations of solar energy?
- (5) Draw a neat and clear diagram of a hydro or hydroelectric power plant. Name its parts and explain how does it work?

(4) Reflection (light)

- (1) Draw a figure of both types of spherical mirrors and write, what is pole, focus, centre of curvature, focal length, radius of curvature and principal axis.
- (2) How images are formed in a concave mirror when an object is placed: →
 (a) at infinity (b) beyond C (c) at C (d) between C and F
 (e) at F (f) between 'P' and 'C'.
- (3) What is magnification? If magnification is +1 then find what type of mirror has been used?
- (4) $v = -40 \text{ cm}$, $u = -20 \text{ cm}$, $f = ?$, $v = ?$, $m = ?$
- (5) Write the difference between real and virtual images?

Teacher's Signature :

Subject: - Biology

1. Draw the diagram of alimentary canal of man and label the following parts:
Mouth, Esophagus, Stomach, Pancreas
2. a) It was observed that the leaves of a plant started getting wilted. Name the tissue which might have blocked state the role of this tissue in plants.
b) Explain opening and closing of stomata with the help of labelled diagrams.
c) Name the physical phenomenon by which exchange of gases occur between plant body and atmosphere.
3. How are the alveoli designed to maximize the exchange of gases?
4. a) With the help of labelled diagram describe double circulation in human beings.
b) What is its significance?
5. What are peristaltic movements?
6. a) Differentiate between arteries and veins.
b) Differentiate between blood and lymph.
7. Why is diffusion insufficient to meet the oxygen requirements of multi-cellular organisms like human?
8. Why does lack of oxygen in muscles often lead to cramps among cricketers?
9. State reason for the following :-
a) In human heart, the walls of the ventricles are thicker than the walls of the atria.
b) In green plants during the day carbon dioxide is generated in respiration but is not released out.
10. i) Draw a neat diagram of human excretory system and label the following parts:
a) Kidneys b) Ureter c) Urinary bladder d) Urethra
ii) State one function of each of them.
11. What is the difference between the manner in which movement takes place in a sensitive plant and the movement in our legs?
12. Draw a neat diagram of human brain and label the following parts :
a) Cerebrum b) Meninges c) Medulla oblongata d) Cerebellum
13. Draw the structure of a neuron and label the part
i) Where information is acquired
ii) Through which information travels as an electrical impulse.
14. a) Why is the use of iodised salt advisable?
b) Why are some diabetes patients treated by giving insulin injection?
15. How does feedback mechanism regulate the hormone secretion?
16. What is the importance of DNA copying in reproduction?
17. Differentiate between binary fission and multiple fission.
18. Why is variation beneficial to the species, but not necessary for the individual?
19. How does the embryo get nourishment inside the mother's body?
20. a) Draw a neat diagram of female reproductive system and label the following organs: ovary, fallopian tube, uterus.
b) What is menstruation? Why does it occur?