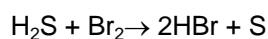


SAMPLE QUESTION PAPER 2015

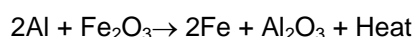
SUMMATIVE ASSESSMENT – I, 2015 SCIENCE Class – X

SECTION-A

1. Identify the compound which is oxidized in the following reaction:{1}



2. Why are titanium and chromium classified as strategic element?
3. Which has a higher resistance: a 50W lamp or 25W lamp bulb and how many times?
4. A drop of litmus solution is added to each of the four solutions give below. State the colour of litmus solution observed in each. Soap solution, Sodium bicarbonate solution, Acetic acid, Tomato juice [2]
5. Translate the following statements into chemical equations and then balance the equations: [3]
- Aluminium metal replaces iron from ferric oxide. Fe_2O_3 , giving aluminium oxide and iron.
 - Barium chloride reacts with zinc sulphate to give zinc chloride and a precipitate of barium sulphate.
6. What is the chemical name of washing soda? Name the three chief raw materials used for making washing soda.
7. Write characteristics used for selecting a suitable fuel.
8. How many 176Ω resistors (in parallel) are required to carry 5A on a 220V line? Distinguish between the terms electrical resistance and resistivity of a conductor.
9. What is solenoid? Draw field lines of the magnetic field through and around a current carrying solenoid. What does the magnetic field pattern inside the solenoid indicate?
10. a) What is power?
- b) In a house hold, 5 tube lights of 40W each are used for 5 hours and electric press of 500W for 4 hours every day. Calculate the total electrical energy consumed by the tube lights and press in a month of 30 days.
11. Given the following reaction



Answer the following with reason.

- Name the oxidising agent.
- Name the reducing agent.
- Name the substance oxidised.

12. A compound which is prepared from gypsum has the property of hardening when mixed with a proper quantity of water. Identify the compound. Write the chemical equation for its preparation. For what purpose is it used in hospital?
- 13.
- Show the formation of NaCl from sodium and chlorine atoms by the transfer of electrons.
 - Why has sodium chloride, a high melting point?
 - Name the anode and the cathode used in electrolytic refining of impure copper metal.
14. What are the functions of
- Gibberellins
 - Cytokinins
 - Absorbic acid
15. Define 'nerve impulse' which structure in a neuron helps to conduct a nerve impulse. What happens at the synapse?
16. State three advantages associated with using solar cells to produce electricity.
- 17.
- State Ohm's law.
 - Draw the circuit diagram of Ohm's law.
 - What is the nature of graph in terms of relation between V and I.
18. a. An electric bulb is rated as 50W, 220V. Calculate the energy consumed by the bulb in 20 minutes. Express your answer in commercial units of electricity.
- Distinguish between Overloading and Short Circuiting in a domestic circuit.
 - Why is it essential to earth electrical appliances having metallic body?
19. What are the environmental consequences of the increasing element for energy? What steps would you suggest to reduce energy consumption?
20. Name the hormone that-
- is produced by thyroid gland
 - Prepares the body for action
 - Controls the amount of sugar in blood
 - Brings about changes in boys at puberty

v. Brings about changes in girls at puberty

21. Draw neat and labelled diagram of digestive system.

Write the functions of the following glands.

- i. Salivary gland
- ii. Liver
- iii. Pancreas

22.

- a. Why should curd and sour substances not be kept in brass and copper vessels?
- b. Why does an aqueous solution of acid conduct electricity?
- c. Why plaster of Paris should be stored in a moisture proof container?
- d. What is efflorescence?
- e. Why is baking soda used as an antacid?

23. a. State reasons for the following.

- i. Metals are good conductor of heat.
- ii. Addition of some silver to pure gold for making ornaments.
- iii. Inability of non – metals for displacing hydrogen from dilute sulphuric acid.

b. Balance the following equations

- iv. $\text{CaO} + \text{H}_2\text{O} \rightarrow \text{Ca}(\text{OH})_2$
- v. $\text{NaOH} + \text{H}_2\text{SO}_4 \rightarrow \text{Na}_2\text{SO}_4 + \text{H}_2\text{O}$

24. a. Explain why i) solar cooker is painted black from inside.

ii) The solar cooker box is covered with a glass sheet. iii) the plain mirror reflector is used in solar cooker.

b. Draw a neat and well labelled diagram of solar cooker

SECTION – B

25 Absorption of light energy by mesophyll cells of leaf causes.

- | | |
|-----------------------------|------------------------------|
| a) Oxidation of chlorophyll | b) Excitation of chlorophyll |
| c) Reduction of chlorophyll | d) Evolution of O_2 |

26 Which of the following does not secrete any hormone?

- a) Testis
b) Spleen
c) Ovary
d) Pancreas
27. Which part of sunlight is used in making solar cell?
a) Infrared radiation
b) Ultraviolet radiation
c) Visible radiation
d) All of these
28. Which one of the following reaction can be a non – redox reaction?
a) Combination
b) Decomposition
c) Displacement
d) Double displacement.
29. Which of the following metal does not react with dilute sulphuric acid to liberate H₂ gas?
a) Calcium
b) Sodium
c) Iron
d) Silver
30. Sodium carbonate is not used as:
a) Ingredient in antacids
b) As a cleaning agent
c) For removing permanent hardness of water
d) For manufacturing of glass
31. Which one of the following compounds is not an ionic compound?
a) Sodium chloride
b) Calcium chloride
c) Carbon tetrachloride
d) Magnesium chloride
32. Which among the following reactions are endothermic in nature?
(i) Decomposition of lead nitrate
(ii) Burning of methane
(iii) Dilution of sulphuric acid
(iv) Dissolution of ammonium chloride in water.
a) i. and ii.
b) ii. and iii.
c) iii. and iv
d) i. and iv
33. Seeds which are kept in the conical flask during the experiment that CO₂ is released during respiration must be.
a) Dry
b) Wet
c) Germinated
d) Boiled
34. In a school laboratory student want to study effect of heat on ferrous sulphate crystal in a boiling tube. State the conclusion he is likely to draw on the basis of his observation. [2]
35. In an experiment to prepare temporary mount of a leaf peel staining of leaf peel is done before putting a drop of glycerine. Explain why?
- Staining is done to observe the specimen under the microscope. Glycerine is a dehydrating agent. It prevent the drying of the specimen. If staining is done after adding glycerine then the specimen will not be stained properly as the stain will be washed off with glycerine. That's why staining is done before adding glycerine so that the specimen can absorb the stain and any excess stain is removed by adding glycerine.
36. A student prepares aqueous solutions of the following salts: Copper sulphate, ferrous sulphate, Sodium sulphate, Barium chloride .

Write the colour of each solution thus formed.