DELHI PUBLIC SCHOOL, DURGAPUR

QUESTION BANK & REVISION SHEET FOR MIDTERM EXAMINATION (2017-18)

CLASS- X

Q1.Give one example of each:
A) Electrolytic decomposition B) Photo decomposition reaction C) Thermal decomposition .D) Double displacement E) Neutralisation reaction F) Combination reaction G) Endothermic H) Exothermic reaction.

Q2. Identify the following as Endo/Exothermic reaction

a)Photosynthesis b) Electrolysis c) Addition of water to quick lime d) Burning of charcoal. e) Respiration

Q3.In the given equation, identify the substance oxidized, substance reduced, oxidizing agent and reducing agent.

$2Na + Cl_2 \rightarrow 2NaCl$

$CuO + H_2 \rightarrow Cu + H_2O$

Q4.You are given the following materials.Identify the following type of chemical reactions taking place when:

a) Barium chloride is added to copper sulphate solution and a white precipitate is observed.

b) On heating green ferrous sulphate crystals ,reddish brown solid residue is leftand a gas with a smell of sulphur is noticed.

c) On heating copper powder in a china dish, the surface of the copper powder becomes black.

d) Quick lime reacts vigorously with water,releasing a large amount of heat.

e)Iron nails when dipped in blue copper sulphate solution becomes brownish in color,the blue color of the solution fades away.

Q5.A water insoluble substance, X on treating with dilute sulphuric acid,released a colorless, odourless gas accompanied by brisk effervescence. When the gas was dissolved in water the solution the solution obtained turned blue litmas paper red.On bubbling the gas through lime water,it initially becomes milky but the milkiness disappears when the same gas was passed in excess. Identify the substance X and write necessary balanced chemical equations for the reactions involved.

Q6. Can Hg displace hydrogen gas from its salt solution? Give your explanation.

Q7. State whether the following reactions are feasible or not.

a $Cu + \text{dil } H_2SO_4 \rightarrow$

b) $Ag + Cu(NO3)_2 \rightarrow$

c) $Zn + FeSO_4 \rightarrow$

d)Fe + $MgSO_4$→

Q8.X + YSO_4→ XSO_4 + Y

Y + XSO_4 →No reaction.

Which metal is more reactive and why?

Q9. A, B and C are three elements which undego chemical reactions according to following equations.

$A_2O_3 + 2B \rightarrow B_2O_3 + 2A$

$3CSO_4 + 2B \rightarrow B_2(SO_4)_3 + 3C$

$3CO + 2A \rightarrow A_2O_3 + 3C$

a) Which element is the most reactive ?
b) Which element is the least reactive?
c) Arrange the elements A, B and C in the increasing order of their reactivity.

Q10. Name the law which is verified by a balanced chemical equation.

Q11. Write one chemical equation to show the above law is verified.

Q12.Why should a magnesium ribbon be cleaned before burning in air ?

Q13. State two main points of differences between displacement and double displacement reaction.

Q14. What is rancidity? How can it be prevented?

ACIDS, BASES AND SALTS

Q1. Define pH.

Q2. What are olfactory indicators ? Give one example.

Q3. What is meant by rancidity? How it can be prevented?

Q4. Why does dry HCl gas not change the colour of the dry litmus paper ?

Q5. Write the name and chemical formula of the calcium compound used for disinfecting drinking water .How is this compound manufactured ?

Q6. Explain why is hydrochloric acid a strong acid and acetic acid ,a weak acid .

ii) State why aqueous solution of an acid conducts electricity.

iii) You have four solutions A,B,C and D .The pH of solution A is 6 ,B is 9 ,C is 12 and D is 7 .Identify most acidic and most basic solutions .

METAL AND NON METALS

Q1. Define the following terms:

a) Ores b) Minerals c) Electrorefining d) Electrolytic reduction

Q2. Write two main points of differences between roasting and calcinations.

Q3. Define a) Alloy b) Amalgam (with two examples)

Q4. Metal like K, Na cannot be extracted by carbon reduction method. Why?

Q5. Define amphoteric oxide with two examples.

Q6. A metal sulphide is converted to metal oxide to extract this metal from its ore. Why?

Q7. What is Thermit process? State one of its common applications.

Q8. Name the cathode, anode and the electrolyte chosen for the electro refining of impure copper. Write cathode and anode reactions. Why is the color and concentration of the solution remain unchanged during the process.?

Q9. State two main points of differences between ionic and covalent compounds with examples.

Q10. No reactions take place when Granules of solid A are mixed with the powder of another solid B. However, when the mixture is heated, a reaction takes place between its components. One of the products ,C is a metal and settles down in the molten state while the other product D floats on top of it. The reaction was highly exothermic. Based on the information conveyed, make an assumption of A and B. Write chemical equations for the reactions taking place.

Q11. Draw the Lewis electron dot structure of CaO, $MgCl_2$, C_2H_4

Q12. Describe froth floatation method. What type of ores are concentrated by this method?

Q13. A customer approached a newly trained Goldsmith and asked him to make some ornaments. For this he gave advanced money also. The Goldsmith bought a bar of 24 carat from the market and tried to make ornaments from it. He was not successful because the gold was too soft to handle. He approached a trained Goldsmith who asked him to use 22 carat gold for this purpose. He was then quite successful and could make the ornaments.

i.) What is the difference between 22 carat gold with 24 carat gold?
ii.) What was wrong with 24 carat gold?
iii.) How did the trained Goldsmith help the freshly trained goldsmith

Syllabus of chemistry Term 1

1. Chemical reactions and equations
2. Acids, bases and salts 3. Metals and Non metals

iv) Arrange the above four solutions in the increasing order of H+ ion concentration.

Q7.With balanced chemical equations, describe the following processes.

a Chlor alkali process b) Solvay process c) Plaster of paris d) Bleaching powder

Q8.Why is it necessary to control the temperature during the preparation of plaster of paris?What is meant by dead burnt plaster?

Q9.State the chemical formula of baking soda. How is it different from baking powder?

Q10.A milkman adds a pinch of baking soda to fresh milk.

a) Why does he do so?

b) What change in pH can be brought by adding baking soda to milk?

Q11.What is Aqua regia? State one of its applications.

Q12.Why should plaster of paris be kept in moisture proof container?

Q13. What is resetting of plaster of paris?

Q14. You have been given three test tubes.One of them contains distilled water and the other two contain and a basic solution respectively. If you are given only red litmus paper, how will you identify the contents of each test tube?

Q15.What would you observe when

a) Red litmus paper is introduced in a solution of Na_2CO_3

b) A drop of phenolphthalein is added to lime water.

c) Blue litmus solution is added to a solution of FeCl3.

Q16. State whether the following resulting solutions will be acidic/basic/neutral

a) A solution of NaOH and H2SO4 b) A solution of acetic acid and NaOH c) A solution of NH_4OH and HCl. d) A solution of sodium nitrate d) A solution of CH_3COONH_4.

Q17. Define water of crystallization. Give two examples.

Q18. State the commercial names of FeSO4.7H2O ,CuSO4.5H2O, CaSO4.2H2O, CaSO4.1/2H2O

MgSO4.7H2O

Q19. Define the following terms: a) Deliquescent b) Efflorescent c) Hygroscopic d) Drying agent e) Dehydrating agent(Giving one example of each type)

Q20. Name two gases which are acidic in nature and also turns lime water milky.