



Chemistry full syllabus test for class 10

1. Which type of bond is formed by carbon? With example show it. How is it different from ionic bond? 5
2. Can soap form lather in homogenous solution of calcium chloride. Justify your answer. What type of water is it? Which chemical is used to remove permanent hardness of water? 3
3. What is the chemical name of $2\text{CaSO}_4 \cdot \text{H}_2\text{O}$? How is it formed? Write any two uses. 3
4. Which type of chemical not obtained by combination reaction? Write equation of burning of natural gas. 2
5. What is the chemical nature of metals? 1
6. Does silver react with oxygen? How is it corroded? How can you remove this coating? 3
7. How the tarnished copper vessel is cleaned? 1
8. What is the ore of mercury? How can you extract mercury? Name one alloy of it. 3
9. What will be the pH if you add some lemon juice into orange juice? Show that hydrogen ions are also present in basic solution. 2
10. The way metals like sodium, magnesium and iron reacts with air and water is an indication of their relative position in the reactivity series. Is this statement true? Justify your answer with equations. 3
11. How many molecules are evaporated to form soda ash? What is the chemical name of baking soda? 2
12. What is the difference between the electrolysis of water with H_2SO_4 and NaOH ? 1
13. Write down the formulas of chloride with natrium, calcium, ammonium, Fe(II) 2
14. Why milkmen add baking soda to the fresh milk during summer? Can you make curd from it easily? 2
15. Molecular formula $\text{C}_2\text{H}_6\text{O}$ undergoes oxidation in presence of alkaline KMnO_4 to form Y. one use of Y. X is reacting with H_2SO_4 at 443K gives Z. Z is reacting with Br_2 and decolourise it. Identify X,Y and Z and write all equations. 5
16. Define alloys. Write uses of soldering, aircrafts, statues, spacecraft. 1+ 2
17. Show the electron dot of O_2 and CaCl_2 . Also state three differences between their bonds. 2+3

18. What is the fifth compound having functional group -COOH. What are another two compounds of the same homologous series? What are the two characteristics of homologous series? 3
19. Give a prove by equation to show nitric acid is a strong oxidising agent. Name to metals those can react with nitric acid to form salt and hydrogen. 1+ 1
20. Which ingredient is used to make pakodas fluffy? Write two other uses with equations of this ingredient. 3
21. Write two observations when Aluminium is reacting with Ferrous chloride? 1
22. Draw structural isomer of C_5H_{12} and functional isomer of propanone. 2
23. Write down the parent acid and parent bases of NH_4Cl , Na_2CO_3 . 2
24. Define anodising. Which material is used as cathode and which material is used as anode? One application of anodising. 3
25. How can you make soap from ester. State differences between soap and detergents. 2+ 2
26. how can you identify alcohol and carboxylic acid? 2
27. differentiate between calcination and roasting. 2
28. how can you collect hydrogen? 1
29. when MnO_2 is reacting with HCl which one is oxidising and reducing agent? 2
30. prove that combination is a redox reaction. 1
31. silicon is having valency of +- 4 like carbon but still carbon can form a large number of compounds. Why? 2
32. what is glacial acetic acid?
33. Name the carbon compound which is inorganic, name an unsaturated plant hormone helps in flowering. 1+1
34. An element X present at the top of the reactivity series and is never found in nature as free. Element Y found in earth crust as oxides and sulphides where as Z present at the bottom of reactivity series. All of them are extracted from their ores. Write down the process with example. 5

35.

Metal	$FeSO_4$	$CuSO_4$	$ZnSO_4$	$AgNO_3$	$Al_2(SO_4)_3$
A	No reaction	Displacement	No reaction	Displacement	No reaction
B	Displacement	Displacement	No reaction	Displacement	No reaction
C	No reaction	No reaction	No reaction	Displacement	No reaction
D	No reaction				
E	Displacement	Displacement	Displacement	Displacement	No reaction

a) which one is the most

reactive metal?

b) what would you observe when you add B to $CuSO_4$ solution?

c) arrange A, B, C,D,E in increasing order of activity.

d) container which can store zinc sulphate and silver nitrate solution

- e) how can you identify FeSO_4 and CuSO_4 ? 5
36. An oxide XO_2 dissolve in water can turn blue litmus red. X is metal or non-metal? 1
37. A is a sweet smelling substance, Y is used in beer, B is sodium salt of weak acid, X is used in oxy acetylene flame, Z is used in preservation of specimens, D is used in vinegar. 3
38. what is alkali? Give example 1
39. A,B,C,D and E when tested with universal indicator showed pH 4,,1,11,7,9. Arrange those in ascending order of H^+ concentration. 2
40. Identified the yellowish white compound of Calcium used in disinfecting of water. How can we identify the strong smell? Also write down the equation with HCl. 3
41. what is oxidation reaction? Write the equation of oxidation of glucose. 2
42. from where we get litmus? 1
43. state two differences between benzene and cyclohexane. 2
44. what is anode mud? For purification of Zn which is used as anode, cathode and electrolyte? 1+3
45. what is third halo alkane? 1
46. what is the pH of acid rain? What are two components of it? What are the sources of those? How is it responsible for marble cancer? 4
47. name the chemical used in cement factory. How is it converted into slaked lime? 2
48. what is universal indicator? Full form of pH.2
49. what amount of carbon di oxide we obtain from the decomposition 200 gm of calcium carbonate? 1
50. name two metals start floating on water while reacting. Also state the difference. 2