

Chemistry full syllabus for std nine

1. Mention the postulate of Dalton's atomic theory that that explain the law of constant proportions. Explain the law by giving example of water. 3
2. Write the chemical formulas of 3
 - a) Calcium hydroxide
 - b) Ammonium sulphate
 - c) Aluminium chloride
 - d) Potassium sulphate
 - e) Copper (II) nitrate
 - f) Calcium sulphate
3. Natural three isotopes Fe_{26}^{54} , Fe_{26}^{56} , Fe_{26}^{57} in the ratio of 5%, 90% and 5% respectively. What will be the average atomic mass of iron? 2
4. State the three rules proposed by Bohr and Bury regarding distribution of electrons in different orbits of atoms. 3
5. What is tincture iodine made up of? 1
6. Which type of substance soap solution is? 1
7. Define Tyndall effect.1
8. To make pickles we cut vegetables and mixed with salts. Why? 2
9. What is an alloy? Give one example with composition.3
10. Name two elements present in liquid state. 1
11. Define molecular mass. 1
12. Write the names of three elementary particles which constitute an atom. 1
13. Find the ratio of masses of the combining elements in the following compounds
 - a) $\text{Al}_2(\text{SO}_4)_3$, b) CaCl_2 3
14. Which of the following species have 18 electrons?
 Ca^+ , K^+ , Na , Cl^- , Ar 2
15. Chemical properties of all the isotopes of an element are similar. State reason. 2
16. S_{16}^{32} a) atomic number of sulphur b) mass number of sulphur c) electronic configuration of S 3
17. Which of the two elements given below would be chemically more reactive X of atomic number 18 or element Z of atomic number 16 and why? 3
18. Name of scientists involved in chemical combination. 2
19. State one difference between oxygen and ozone. 1

20. Give one example of each
a) Diatomic molecule b) triatomic molecule c) tetra atomic molecule d) polyatomic element
2

21. A solution is prepared by adding 40 gm of sugar in 100gm of water. Calculate the concentration in terms of mass by mass percentage of solution. 2

22. What is latent heat? Why is it called hidden heat? 2

23. 20g of sodium chloride is dissolved in 100ml of water. How will you test whether the given solution is saturated or unsaturated at the given temperature? 2

24. What is canal ray? 1

25. Make a tabular form of electron, proton, neutron properties. 3

26. Why CO_2 is considered as a gas? What is the solidified CO_2 called? Two uses of that. How can we convert liquid into gas? 5

27. While doing an experiment to find out percentage of water absorbed by raisins a student recorded the mass of dry raisins as 4g and mass of raisins after soaking in water as 7 g. what is the percentage of absorption? 2

28. Four uses of isotopes.2

29.

Elements	A	B	C	D	E
Atomic Mass	1	7	14	40	40
Atomic No.	1	3	7	18	20

a) Select the pair of isobars from the above table.

b) What would be the valency of element C listed in the above table?

c) Which two subatomic particles should be equal in a neutral atom? 3

30. Give reasons why

A) ice at 273K is more effective in cooling than water at same temperature.

b) Naphthalene balls disappear with time without leaving any solid.

c) A desert cooler cools better on a hot dry day 3

31. What are the main three conclusions given by Rutherford's model

Or

State Dalton's atomic theory. 3

32. Find the atomicity 2

K_2CO_3 , HCO_3^- , PCl_5 , CH_3OH

33.

The table below shows the electronic arrangements of six atoms, A to F. Find :

Atom	A	B	C	D	E	F
Electronic arrangement	2,8,6	2,8,8	2,8,3	2	2,8,8,6	2,5

- a) An atom with the atomic number 24
b) Two atoms with valency 2
c) An atom that is inert 3
34. Write down the valence electrons of the followings
Mg, Ne, S, Cl⁻, Al⁺³, He 3
35. The valency of X is -2.....its formula with Mg. 1
36. When 10 gm of sulphur is burnt in 10 gm of oxygen 20gm of sulphur di oxide is produced.
Find the mass of sulphur di oxide formed on burning 20 gm of sulphur in 30 gm of oxygen? 2
37. Element A,B,C,D,E are having atomic no and mass no 7,14;6,12;6,14;8,16;8,18.
a) How many isotopes are present here?
b) Find a pair of isobar
c) Find the element with valency 2
d) Find an element with 5 valence electrons
e) Calculate the number of different subatomic particles in atom C 5
38. Give example of each diatomic element and diatomic molecule. 2
39. The atomic number of A,B,C are 9,10,13 respectively. Which of these form a cation? 1
40. What are the different types of isotopes of hydrogen? Explain in detail. 3
41. What is valency? Identify cations and anions with their valency from the following compounds Al₂O₃, CaO, KCl, N₂O 2
42. A, B,C,D carried out the following chemical reactions to verify the law of conservation of mass . who got the best result? 2
A added dilute HCl to limestone
B dipped Mg ribbon in copper sulphate solution
C added copper sulphate to sodium carbonate solution
D heated solid lead nitrate in a test tube
43. Ca + Cl₂ = CaCl₂ calculate the mass in gm of calcium chloride formed when 20 gm of calcium combines with 35.5gm of chlorine gas. 2
44. Number of neutron is 10% more than the number of proton. If the number of neutron is 22 then find the atomic number and mass number. 2

45. Name the element with 5 electrons present in M shell. What would the valency of it? Will it form cation or anion? 2
46. Full form of CNG, LPG. Convert 310K into Celsius. 3
47. What is the difference among 2N, N₂, N, 2N₂. 2
48. What is sublimation. explain with example. 3
49. What are the characteristics of colloid? Difference between sol and gel. 2