

DELHI PUBLIC SCHOOL, JAMMU.

ASSIGNMENT FOR PERIODIC TEST-3

(2017-2018)

SUB: CHEMISTRY

CLASS: 11TH

VERY SHORT ANSWER TYPE QUESTIONS

1. Draw the Lewis dot structure of H_3PO_3 ?
2. What is the basic difference in approach between Mendeleev's periodic law and modern periodic law?
3. For an isolated system, $\Delta H=0$, what will be ΔS ?
4. What will be the enthalpies of all elements in their standard states?

SHORT ANSWER TYPE QUESTIONS

5. Calculate the mass percent of different elements present in Na_2SO_4 ?
6. Using s, p, d and f notation, describe the orbital with the following quantum numbers-
(a) $n=1, l=0$ (b) $n=3, l=1$ (c) $n=4, l=2$
7. State Heisenberg's uncertainty principle. Calculate the uncertainty in the position of an electron if the uncertainty in its velocity is 5.7×10^5 m/s.
8. How many protons and neutrons are present in the following nuclei:
a) ${}_6^{13}\text{C}$
b) ${}_8^{16}\text{O}$?

LONG ANSWER TYPE QUESTIONS

9. Calculate the entropy change in surroundings when 1.0 moles of $\text{H}_2\text{O}(l)$ is formed under standard conditions. Given $\Delta H^\circ = -298$ kJ mol⁻¹?
10. a) Explain why HCl is a gas and HF is a liquid?
b) Why is water molecule polar?
11. Give reasons why Hydrogen resembles alkali metals?
12. Describe the biological importance of sodium and potassium?
13. Draw the structure of BeCl_2 (vapour) and BeCl_2 (solid)?
14. Describe the importance of the following:
a) Limestone
b) Cement
c) Plaster of Paris.
15. What is meant by hybridisation of atomic orbitals? Describe the shapes of:
a) PF_5
b) SF_6
16. Calculate the no. of moles of KJ necessary to raise the temperature of 60 g of Al from 35 to 55 °C. Molar heat capacity of Al is $24 \text{ J mol}^{-1}\text{K}^{-1}$?

VERY LONG ANSWER TYPE QUESTIONS

17. Which of the following pair of elements would have a more negative electron gain enthalpy and explain why:

a) O or F?

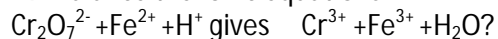
b) F or Cl?

18. What is meant by conjugate acid base pair? Find the conjugate acid/ base for the following:

a) HNO_2

b) CN^-

19. Balance the ionic equations:



CHAPTERS:

1. SOME BASIC CONCEPTS

2. STRUCTURE OF AN ATOM

3. CLASSIFICATION OF ELEMENTS

4. CHEMICAL BONDING

5. STATES OF MATTER

6. THERMODYNAMICS

7. EQUILLIBRIUM

8. REDOX REACTIONS

9. HYDROGEN

10. S-BLOCK ELEMENTS.