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INSTRUCTIONS

1. Home work should be written in,
" LAB OBSERVATION BOOK "
2. Number of times. (2)
3. It should be in hand written - No

TYPED MATERIAL

4. DATE OF SUBMISSION ON THE 1ST LAB
SESSION AFTER HOLIDAYS

CHEMISTRY I pvc Holiday HOME WORK

1. Mention three postulates of 'dalton's atomic theory'.
2. write any three postulates of 'Bohr's model for hydrogen atom.'
3. write any three postulates 'Kinetic theory of gases'
4. The compound contains 4.07% Hydrogen, 24.27% Carbon and 71.65% Chlorine. Its molar mass is 98.96 g mol^{-1} . what are its Empirical and molecular formula?
5. Give the significance of four Quantum numbers.
6. State i] Pauli's exclusion principle
ii] Hund's rule
iii] Aufbau principle
iv] Heisenberg uncertainty principle
7. State i] Law of multiple proportions
ii] Law of definite proportions
iii] Avogadro's law
8. State charl's law and write the mathematical expression for the law

9. Define Ideal gas. derive ideal gas equation using gas laws & deduce the value of gas constant 'R' in SI units.
10. State Boyle's law and write its mathematical form.
11. Explain sp^3 hybridisation taking methane $[CH_4]$ as example.
12. Explain sp^2 hybridisation taking BH_3 / C_2H_4 as example.
13. Explain sp hybridisation taking $BeCl_2 / C_2H_2$ as example.
14. Explain the shape of water & ammonia molecule based on VSEPR theory.
15. write electronic configuration of lithium molecule. Calculate bond order & mention its magnetic property.
16. write electronic configuration of Hydrogen molecule. Calculate bond order & magnetic property.
17. write electronic configuration of Oxygen molecule. Calculate bond order and mention its magnetic property.

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18. write Electronic configuration of carbon molecule. Calculate bond order and mention its magnetic property.
19. Give differences between sigma bond and pie bond.
20. what is ionisation enthalpy? How does it vary in a group and period of the periodic table? Explain.