

J.E.E./A.I.P.M.T.Foundation - XI Chemistry Worksheet

Time: 30 min

Ch#5 : States of Matter -02

Full Marks: 20

Instructions:

1. All questions are compulsory.
2. Please give the explanation for the answer where applicable.

Q1 - Distinguish a solid, liquid and gas in terms of melting point and boiling point?

(3 Marks)

Q2 - What is the difference between intermolecular forces and intra-molecular forces?

(2 Marks)

Q3 - Define triple point of a substance?

(1 Mark)

Q4 - Which type of intermolecular forces exist among the following molecules?

- (a) H_2O molecules.
- (b) H_2S molecules.
- (c) Cl_2 and CCl_4 molecules
- (d) He atoms and HCl molecules

(2 Marks)

Q5 - What do you understand by standard temperature and pressure?

(1 Mark)

Q6 - Write the ideal gas equation for n moles of gas.

(1 Mark)

Q7 - Which of the following has-

- (a) highest vapour pressure
- (b) lowest vapour pressure.

Acetone, Ethyl alcohol, Water, Diethyl ether

(2 Marks)

Q8 - 34.05 mL of phosphorus vapour weighs 0.0625g at 546°C and 0.1 bar pressure. What is the molar mass of phosphorous?

(2 Marks)

Q9 - The density of a gas is 3.80 g L^{-1} at S.T.P. Calculate its density at 27°C and 700 torr pressure.

(3 Marks)

Q10 - 1 mole of SO_2 gas occupies a volume of 350 mL at 27°C and 50 atm pressure. Calculate the compressibility factor of the gas. Write the type of deviation shown by the gas from ideal behavior.

(3 Marks)