

SECTION D(VERY LONG ANSWERS)

Q.20. What is meant by the term bond order? Calculate the bond order of: N_2 , He_2 , O_2^+ , and C_2 ?

Q.21. Explain the following terms:

- a) Molarity
- b) Molality
- c) Mole fraction
- d) Limiting reagent
- e) a.m.u.

Q.22. If 1 gm each of the given gases (CO , H_2O , CH_4 , NO) are taken at STP, which of the gases will occupy the greatest volume and why?

Q.24. An organic compound containing carbon and hydrogen has 49.3% C, 6.84% H and its vapour density is 73. What is the molecular formula of the compound?