Date Planned : __ / __ / __	Daily Tutorial Sheet-15	Expected Duration : 90 Min
Actual Date of Attempt : __ / __ / __	Level-3	Exact Duration :_____

Paragraph for Question No. 159 to 161

When reacting gases taken in eudiometer tube are exploded by sparks produced by passing electricity through the platinum terminal provided in the tube. The volume of the products of a gaseous explosion are determined by absoring them in suitable reagent for example CO_2 and SO_2 are absorbed in KOH solution O_2 is adsorbed in a solution of alkaline pyrogallol. Since H_2O vapour produced during the reaction changes to liquid on cooling the volume of water is neglected.

159. On sparking, the volume of one litre of oxygen reduces to 0.8 L. The mole fraction of ozone in the resultant mixture is :

(A) 0.5 **(B)** 0.4 **(C)** 0.2 **(D)** 1

160. If in an experiment 100 ml of ozonised oxygen was reduced in volume to 40 ml (at the same temperature and pressure) when treated with turpentine oil, what would be the increase in volume if the original sample was heated until no further change occurred and then brought back to same temperature and pressure?

(A) 20 ml **(B)** 30 ml **(C)** 40 ml **(D)** 10 ml

161. 50 ml of a mixture of NH_3 and H_2 was completely decomposed by sparking into nitrogen and hydrogen. 40 ml of oxygen was added and the mixture was sparked again. After cooling to the room temperature, the mixture was shaken with alkaline pyrogallol and contraction of 6 ml was observed. The % NH_3 in the original mixture would be :

(A) 72 **(B)** 28 **(C)** 20 **(D)** 80

For Question No. 162 to 164

Each question contains Statement-1 (Assertion) and Statement-2 (Reason).

Examine the statements carefully and mark the correct answer according to the instructions given below

(A) If both the statements are TRUE and Statement-2 is the correct explanation of Statement-1

(B) If both the statements are TRUE but Statement-2 is NOT the correct explanation of Statement-1

(C) If Statement-1 is TRUE and Statement-2 is FALSE

(D) If Statement-1 is False and Statement-2 is TRUE

162. **Statement-1:** CH_4, CO_2 has value of Z (compressibility factor) less than one at 0°C

Statement-2 : $Z < 1$ is due to the fact that attractive forces dominate among the molecules

163. **Statement-1:** On increasing the temperature, the height of the peak of the Maxwell distribution curve decreases

Statement-2 : The fraction of molecules is very less at the higher speeds

164. **Statement-1:** Reacting gases react to form a new gas having pressure equal to the sum of their partial pressure

Statement-2 : Pressure exerted by a mixture of non-reacting gases present in a container is equal to the sum of their partial pressures.