15 Fifteen only
12-10-2021
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Physical Chemistry-Properties of Gases

Name of a student ---------- Signature ---------- No. 5

University of Mustansiriyah — **1st Semester-2021**

Department of Chemistry — **1st Exam-paper B**

Q1: Circle the right answer for all of the following:

1: Helium represents a.
Answer: a) real gas b) ideal gas c) noble gas d) heavy gas — 5/5

2: A 0.2 L container contains a certain amount of gas at 1.0 bar pressure. The gas is transferred to another vessel of volume 0.5 dm^3. What should be it is pressure?
Answer: a) 0.60 atm b) 0.40 dm^3 c) 0.4 atm d) 0.4 mmHg — 0/5

3: A gas occupies 299 dm^3 at 127 °C and 760 mm pressure. What would be it is volume at STP?
Answer: a) 199.8 L b) 199 dm^3 c) 200 L d) 204 dm^3 — 0/5

4: Calculate the weight of CH_4 (16 $g.mol^{-1}$) in a 10 L cylinder at 15 atm and 34 °C.
Answer: a) 95.33 g mol^{-1} b) 95.33 g c) 85.80 mol d) 86.65 g — 0/5 — 15/150

5: Calculate the number of moles for CH_4 in a 12 L cylinder at 14 bar and 28 °C.
Answer: a) 6.8 mol b) 6.9 mol c) 6.5 mol d) 6.7 mol — 0/5

6: According to Graham's law the heaviest gas is?
Answer: a) H_2 b) O_2 c) N_2 d) CO_2 — 0/5

7: According to the Avogadro's law the amount of a substance is directly proportional with?
Answer: a) p b) T c) R d) V — 5/5

8: The difference between real and ideal gas is one of the following?
Answer: a) p & V b) T & n c) d) attraction forces & volume of a gas — 0/5 NO ANSWER

9: It can know the molecular mass of un known gas by applying one of the following?
Answer: a) Boyle's law b) Graham's law c) Charles's law d) Gay-Lussac's law — 0/5

10 **10:** If V_m is bigger than V^O_m then this means the behaviour of a gas is?
Answer: a) Real b) Ideal c) Real & ideal d) Z = 0 — 5/5

Q2: A gas sample has a mass of 9.98 g. Its volume is 21.6 L at a temperature of 75.46 °C and a pressure of 641 Torr. Calculate its molar mass.

NO ANSWER — Q2 0/25

Q3: A 1.3 mole of Ar gas is placed in a container at 27 °C at a pressure of 725 torr. What is the volume of the container in ml?

NO ANSWER — 0/25

12/01/2021 — Best wishes — Dr Abduljabbar I. R. Rushdi