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Gases	Mia	bay	1	
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Physical Chemistry-Properties of Gases	Subour Pile			
Name of a student - Signature	No. 32			
University of Mustansiriyah	1st Semester-2021			
Department of Chemistry	1 st Exam-paper B			
Q1: Circle the right answer for all of the following:	(50 degree)			
1: Carbon dioxide is classified as a .				
Answer: a) toxic gas b) ideal gas c) real gas d) heavy gas				
2: A 2 dm³ container contains a certain amount of gas at 0.5 atm pressure. The gas is to of volume and the pressure is 0.25 bar. What should be it is Volume? Answer: a) 0.40 atm b) 649 dm³ c) 0.4 bar d) 4 bar	ansferred to another vesse			
Answer: a) of the daily of the				
3: A gas occupies 400 dm³ at 130 °C and 76 cmHg pressure. What would be it is volumed Answer: a) 270 L (b) 207 dm³ c) 207 m³ d) 204 cm³				
4: Calculate the weight of H ₂ (2.00 g.mol ⁻¹) in a 2 L cylinder at 2.5 atm and 27 °C. Answer: a) 0.40 mol ⁻¹ b) 0.40 g c) 0.40 mol g ⁻¹ d) 0.4 g mol ⁻¹	PU=nAl			
5: Calculate the number of moles for CO ₂ in a 10 L cylinder at 8 bar and 27 °C. Answer: (a) 3.25 mmol (b) 3.00 mol (c) 3.00 L (d) 2.99 mol	25)			
6: According to Graham's law the lightest gas is? Answer: a) H ₂ b) O ₂ c) N ₂ d) CO ₂	9,50			
7: According to the Boyle's law the pressure of a gas is inversely proportional with?	\ \			
Answer: a) mol b) T c) R d) V				
8: If a gas has Vm ≠ V ^o m then this means one of the following? Answer: a) real b) noble c) ideal d) heavy				
9: If RT > pV this means the forces dominated are?				
Answer: (a) attraction (b) repulsion (c) Van der Waal's (d) no one of these				
10: According to Gay-Lussac's law the volume of the gas is?	- The			
Answer: a) constant b) variable c) equal to zero d) eq	ual to 22.4 L			
Q2: Under the same conditions of temperature and pressure, how many times faster will hydrogen effuse				
compare to carbon dioxide.	(25 degree)			

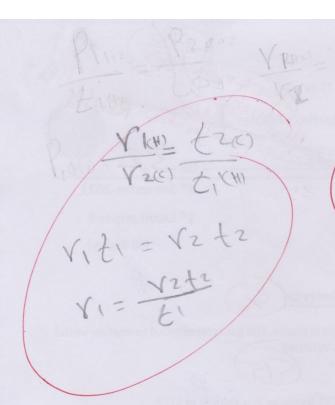
Q3: Calculate the density of carbon dioxide (44 g mol⁻¹) at STP.

(25 degree)

Wed_20/01/2021

Best wishes

Dr Abduljabbar I. R. Rushdi



Q2 25

PV= NR+

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PV= MRS

R(Latm) * t(K)

PMg/mol = MS * R(Latm) * t(K)

PM= dRT

(*44/6/1001) = d * 0-0082 Latm * 273 K

1*44/6/1001) = d * 0-0082 Latm * 273 K

Q3 25)

STP U3 P=19+m T=273 K N=1mol V=22-4L