

Pi	a) (700) Senenty only
Physical Chemistry_Chpt_One_Prop	perties of Gases what Properties
Name of a student - Rueda Sad Mahamed Signature - 12	reda Abadwa 19
University of Mustansiriyah	1 <sup>st</sup> Semester-2021
Department of Chemistry	1st Exam-paper A
Q1: Circle the right answer for all of the following:	うしめいじらい。
1: If a gas has a non-polar particle then the difference between the	
Answer: a) V <sub>Real</sub> > V <sub>Perfect</sub> b) V <sub>Real</sub> > V <sub>Perfect</sub> c)	V <sub>Real</sub> = V <sub>Perfect</sub> d) V <sub>Real</sub> ≠ V <sub>Perfect</sub>
2: A gas occupies 300000 mL at 130 °C and 760 mmHg pressure. Wha	
Answer: a) 203.22 mL b) 203.22 dm <sup>3</sup>	204 dm <sup>3</sup>
3: Calculate the weight of CH <sub>4</sub> (16 g.mol <sup>-1</sup> ) in a 10 L cylinder at 15 x 10 Answer: a) 95.33 g mol <sup>-1</sup> b) 95.33 g c) 95.33 mol d) 95.3	0 <sup>5</sup> Pa and 307 K.
لات للمثان	
4: Calculate the number of moles for CH <sub>4</sub> in a 10000 mL cylinder at 10 Answer: a) 4.5 mol b) 4.0 mol c) 4.0 mmol d) 4.5 mmol	D° Pa and 32 °C.
5: According to Graham's law the heaviest gas is?	19,50
	CO 5 Sier Haye
<b>6:</b> A 20 L tank contains a certain amount of gas at 10 <sup>5</sup> Pa. The gas is should be its pressure?	
Answer: a) 0.50 atm b) 50 dm <sup>3</sup> c) 50 atm d) 0.50 mmHg	
7. According to the Averages's low the great of the little of the	وقعا لعالول اعوا
7: According to the Avogadro's law the amount of a substance is directly an angle of the Answer: a) p b) T c) R d) V e)	ctly proportional with?
8: The difference between real and ideal gas is one of the following?	
	high p & high T d) law p & law T
with the contract of the contract of	, , , , , , , , , , , , , , , , , , , ,
9: It can know the density of a gas by applying one of the following?	
Answer: (a) Van der Waal's law (b) Graham's law (c) Charles's	law d) Gay-Lussac's law
18120 m 17 2 2 (m) 401'00 Letter 200 10181	
10: If V <sub>m</sub> is bigger than V <sub>m</sub> then this means the behaviour of a gas is?	•
Answer: (a) Real (b) Ideal (c) Real & ideal (d) Z < 1	
Q2: A (28 mol) gas sample has a mass of 10000 mg. The volume of a container is 22 dm <sup>3</sup> at a temperature of 76	
<sup>o</sup> C and a pressure of 641 Torr. What is the density of the gas?	(25 points)
Q3: An Ar gas is placed in a container at 30 °C at a pressure of 730 to	عَاذِ الاركونَ ومَعْنَافِ وعاد دهِ حاري
	or. what is the volume of the container in
ml?	(25 points)

09/11/2021

**Best wishes** 

Dr Abduljabbar I. R. Rushdi

Q211
N= 28 mol, m= 10000 mg, V= 22 d/v2, T-760, P= 6m Torr
Name of a student Paralla Sanda Stenature
V: 2000 0.022L ) T=76+273=549K) A = 641 = 0.84394m
21: Circle the right answer for all of the following:
M, m, 1000 3357) 1 3 Inch
d: 4M = 0.8 43 atm x 3572 9/mil x 349K 20
RT 0.082 1.42 X
Spins of Oze a sample for Que and on the same of the s
01: 188 3/1
Antimer: a) H <sub>2</sub> O b) CH <sub>4</sub> c) 10H <sub>5</sub> d) CO
St A 20 L tank contains a certain amount of gas at 10° Pa. The gas is transhined to another tank 4016 fem-
T = 300, P = 730 TolVeo to man 02 to mar 02.0 (a mare 02.0 (a
T330+27353035
8 3 730 = 0.96 atm (22
Answers - 13) Van der Waaf's law (planetes law of Charles's law of Cay-Lucca + 9 N c V 9:
181 If Va. is breger than Va. men this means the behaviour of a gas ref
V3 NKT (b lead of Real of Real of Lead
0.96 atm
Q3. An Ar gas is placed in a container at 30 °C at a pressure of 730 byr. What is the volume of the container in
V = 25.8 L
Os/11/2021 Sest wishes Abduljabbar L. R. Rushdi
V, 25.8 X 1000
v. 25800 ml