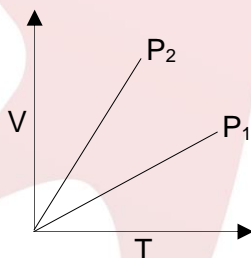


(ECC02-0007E-PMC-02M)

- If the four tubes of a car are filled to the same pressure with  $N_2$ ,  $O_2$ ,  $H_2$  and He separately, then which one will be filled first?
  - $N_2$
  - $O_2$
  - $H_2$
  - He

(ECC02-0028E-PMC-04H)

- "V" versus "T" straight lines at constant pressures  $P_1$  and  $P_2$  for an ideal gas are shown in figure. Which is correct?



- $P_1 > P_2$
- $P_1 < P_2$
- $P_1 = P_2$
- Both B & C

(MCC02-UHS-16M)

- Which one of the following statements correct about Charles' law?
  - Volume is directly proportional to temperature (at constant P)
  - $PV = nRT$  (at const P)
  - Reciprocal Volume is inversely proportional to Temperature in Kelvin (at constant P)
  - The quotient of P and Temperature in kelvin scale is equal to K (K depends on Pressure)

(MCC02-UHS-17M)

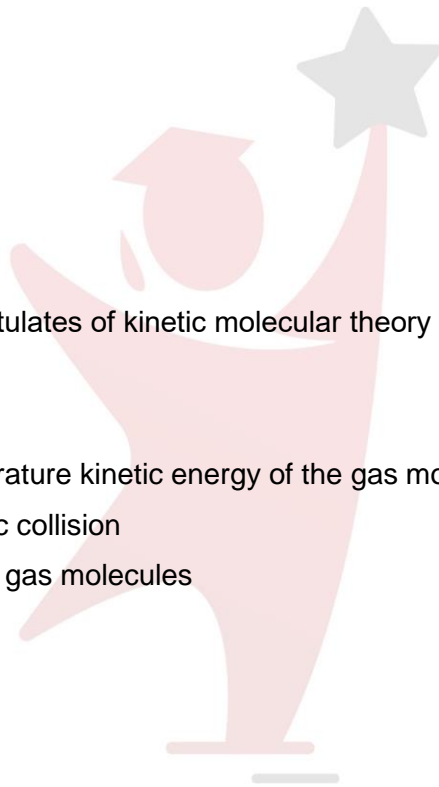
- If a gas is warmed by  $1^{\circ}\text{C}$ , it will \_\_\_\_\_ by  $1/273$  of its original volume
  - A) Contracts
  - B) Expands
  - C) Shrink
  - D) Squeezed

(MCC02-UHS-18M)

- Which one of the following postulates of kinetic molecular theory (KMT) of gases explains Charles's law?
  - A) Gases exert pressure
  - B) With the increase of temperature kinetic energy of the gas molecule increases
  - C) Gas molecules show elastic collision
  - D) No attractive forces among gas molecules

(MCC02-UHS-19M)

- If we decrease temperature of a gas 2 times, its volume will.
  - A) Increase 4 times
  - B) Decrease 4 times
  - C) Decrease 2 times
  - D) Increase 2 times



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**(MCC02-UHS-21M)**

- Which of the following statement correct about Avogadro's law?
  - A) Equal volume of real gas contain equal number of molecules at constant pressure and temperature
  - B) Equal volume of ideal gas contain equal number of molecules at constant mole and temperature
  - C) Equal volume of ideal gas contain equal number of molecules at constant pressure and temperature
  - D) Equal volume of real gas contain different number of molecules at constant pressure and temperature.

**(MCC02-UHS-22M)**

- Which of the following mathematical expression represent the Avogadro's law?
  - A)  $V = R \frac{nT}{P}$  (When T and n are constant)
  - B)  $V = R \frac{nT}{P}$  (When T and P are constant)
  - C)  $V = R \frac{nP}{T}$  (When T and P are constant)
  - D)  $V = R \frac{nT}{P}$  (When T, P and n are constant)

**(MCC02-UHS-23M)**

- Which of the following pairs of gases possess equal volume at STP
  - A) 44g CO<sub>2</sub> and 44g CO
  - B) 16g O<sub>2</sub> and 32g CH<sub>4</sub>
  - C) 3.01 x 10<sup>23</sup> molecules of CO and 3.01 x 10<sup>23</sup> grams molecules of H<sub>2</sub>
  - D) 0.5 mole of NO and 16 g O<sub>2</sub>

**(MCC02-UHS-24M)**

- General gas equation is a combination of:
  - A) Boyle's law and Charle's law
  - B) Boyle's law and Avogadro's law
  - C) Avogadro's law and Charle's law
  - D) Avogadro's law and Graham's law

**(MCC02-UHS-25M)**

- Which mathematical relationship doesn't correctly represent behavior of an ideal gas?
  - A)  $V = R \frac{nT}{P}$
  - B)  $\frac{P_1 T_2}{V_2} = \frac{P_2 T_1}{V_1}$
  - C)  $M = \frac{dRP}{T}$
  - D)  $\frac{P_1 V_1}{T_1 m_1} = \frac{P_2 V_2}{T_2 m_2}$
  - E) Both C and D

**(MCC02-UHS-27M)**

- $PV/nRT$  for an ideal gas is called
  - A) Expansion factor
  - B) Depression factor
  - C) Compressibility factor
  - D) Diffusion factor



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(MCC02-UHS-28M)

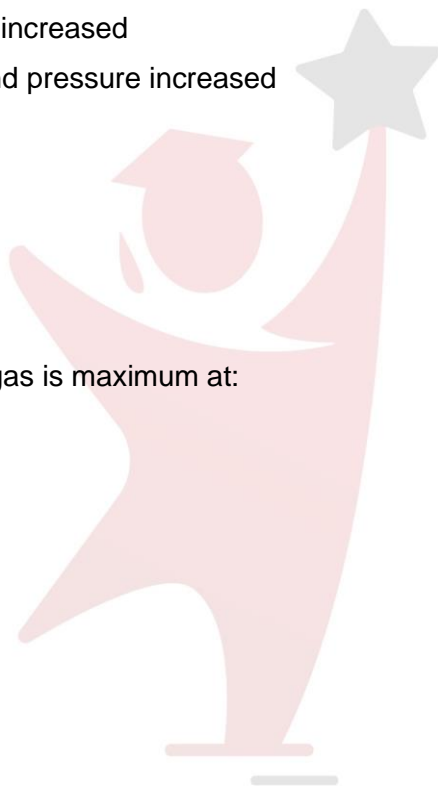
- How will the conditions be changed to prevent the volume of the given gas from expanding when its mass is increased?
  - A) Temperature and pressure increased
  - B) Temperature is lowered, and pressure decreased
  - C) Temperature and pressure increased
  - D) Temperature is lowered, and pressure increased

(MCC02-UHS-29M)

- The molar volume of nitrogen gas is maximum at:
  - A) 25°C and 1 atm
  - B) 0°C and 2 atm
  - C) 130°C and 1 atm
  - D) 100°C and 2 atm

(MCC02-UHS-30M)

- Gas constant "R" is independent of:
  - A) Pressure of gas
  - B) Volume of gas
  - C) Nature of gas
  - D) Temperature



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Answer Key	
1	C
2	A
3	C
4	B
5	B
6	C
7	C
8	B
9	D
10	A
11	E
12	C
13	D
14	C
15	C

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