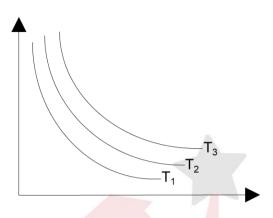
## PRACTICE MATERIAL FOR APTITUDE TEST PREPARATION - MCAT/ NMDCAT/ (MBBS)

## (ECC02-0030M-PMC-08H)

"P" versus "V" curves and constant temperatures T1, T2, & T3 are given in figure. Which is correct?



- A)  $T_1 < T_2 < T_3$
- B)  $T_1 = T_2 = T_3$
- C)  $T_2 < T_1 < T_3$
- D)  $T_1 > T_2 > T_3$

### (MCC02-UHS-01)

Under what conditions of temperature and pressure will a real gas behave like an ideal gas?

Options	Temperature	Pressure
A)	Low	Low
В)	Low	High
C)	High	High
D)	High	Low

# (MCC02-UHS-03)

- Which one of the following gases shows easily deviate from ideal behavior?
  - A) O<sub>2</sub>
  - B) CO<sub>2</sub>
  - C) N<sub>2</sub>
  - D) H<sub>2</sub>









#### PRACTICE MATERIAL FOR APTITUDE TEST PREPARATION - MCAT/ NMDCAT/ (MBBS)

#### (MCC02-UHS-04)

- Under high pressure which of the following gas show more ideality in character
  - A)  $N_2$
  - B) He
  - C) NH<sub>3</sub>
  - D) SO<sub>2</sub>

### (MCC02-UHS-05)

- Which of the statement is applicable for both ideal and real gases molecules?
  - A) Have no forces of attraction
  - B) Collisions between the molecules is elastic
  - C) Molecules are in random movement
  - D) The actual volume of gas is negligible as compared to the volume of gas

#### (MCC02-UHS-06)

- Gases deviate from ideal behavior at high pressure. Which of the following is correct for non-ideality?
  - A) At high pressure, the gas molecules move in one direction only
  - B) At high pressure, the collision between the gas molecules is increased manifold
  - C) At high pressure, the volume of the gas becomes insignificant
  - D) At high pressure, the inter-molecular attractions become significant

#### (MCC02-UHS-07)

- The molecules of gas show more deviation from ideal behavior at low temperature, because
  - A) Kinetic energies are increased.
  - B) Densities of the gases increased
  - C) Collisions become less frequent
  - D) Attractive force dominate at low temperature





#### (MCC02-UHS-08)

- An ideal gas can't be liquefied because.
  - A) Its critical temperature is always above O0C
  - B) Its molecules are smaller in size
  - C) It solidified before becoming a liquid
  - D) Forces between its molecules are negligible

### (MCC02-UHS-09)

- Who attributed the deviation of real gases from ideal behavior
  - A) Boyle's law
  - B) Charles's law
  - C) Avogadro's law
  - D) Van der Waals

### (MCC02-UHS-10)

- If P, V, T represent pressure, volume and temperature of the gas, the correct representation of Boyle's law is
  - A) V is inversely proportional to P (at constant T)
  - B) PV = nRT (at const T)
  - C) Reciprocal Volume is inversely proportional to T(at constant P)
  - D) The quotient of P and V is equal to K

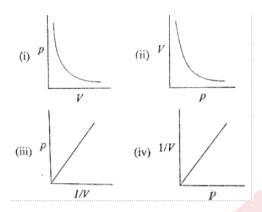






## (MCC02-UHS-11)

• Which graph represents Boyle's law?



- A) (i),(ii),(iii),(iv)
- B) (i),(ii),(iv)
- C) (i),(iii)
- D) (ii),(iii)

## (MCC02-UHS-12)

- For a definite mass of an ideal gas at constant temperature, the plot of which pair of species will gives a curved graph
  - A) PV vs P
  - B) Pvs V
  - C) P vs V -1
  - D) PV vs P -1

## (MCC02-UHS-13)

- When sample of a gas is compressed at constant temperature from 15 atm to 60 atm, its volume changes from 76.0cm³ to 20.5cm³?
  - A) The gas behaves ideally
  - B) The gas behaves non-ideally
  - C) The volume of gas decreases
  - D) Gas is absorbed on the vessel walls









## (MCC02-UHS-14)

- What volume does 400 cm<sup>3</sup> sample of a gas at 760 torr occupy when the pressure is changed to 2 atm?
  - A) 200 cm<sup>3</sup>
  - B) 184 cm<sup>3</sup>
  - C) 800 cm<sup>3</sup>
  - D) 0.02 dm<sup>3</sup>
  - E) 0.4dm<sup>3</sup>

# (MCC02-UHS-15)

- The gas is at 3 atm, what will be the pressure of a gas if it expands three times.
  - A) 1 atm
  - B) 3 atm
  - C) 6 atm
  - D) 9 atm

ANS: (A)









Answer Key		
1	Α	
2	D	
3	В	
4	В	
5	С	
6	D	
7	D	
8	D	
9	D	
10	Α	
11	Α	
12	В	
13	В	
14	Α	
15	Α	







