doubtnut
India's Number 1 Education App

CHEMISTRY

BOOKS - VIKRAM PUBLICATION (ANDHRA PUBLICATION)

STATES OF MATTER GASES AND LIQUIDS

Solved Problems

1. What will the minimum pressure required to compress $500dm^3$ of air at 1bar to $200dm^3$ at $30^\circ C$?

Watch Video Solution

2. A vessel of 120 mL capacity contains a certain amount of gas at $35^\circ C$ and 1.2 bar pressure. The gas is transferred to another vessel of volume 180 mL at $35^\circ C$. What would be its pressure?

Watch Video Solution

3. Using the equation of state $pV = nRT$, show that at a given temperature density of a gas is proportional to gas pressure p.

Watch Video Solution

4. At $0^\circ C$ the density of a certain oxide of a gas at 2bar is same as that of dinitrogen at 5 bar, What is the molecular mass of the oxide?

Watch Video Solution

5. Pressure of 1g of an ideal gas A at $27^{\circ}C$ is found to be 2 bar. When 2g of another ideal gas B is introduced in the same flask at same temperature the pressure becomes 3 bar. Find the relationship between their molecular masses.

6. The drain cleaner , Drainex contains small bits of aluminium which react with caustic soda to produce dihydrogen. What volume of dihydrogen at $20^{\circ}C$ and one bar will be released when 0.15 g of aluminium reacts?

Watch Video Solution

7. What will be the pressure exerted by a mixture of 3.2 g of methane and 4.4 g of

carbon dioxide contained in a $9dm^3$ flask at $27^\circ C$?

Watch Video Solution

8. What will be the pressure of the gaseous mixture when 0.5 L of H_2 at 0.8 bar and 2.0 L of dioxygen at 0.7 bar are introduced in a 1 L vessel at $27^\circ C$?

Watch Video Solution

9. Density of a gas is found to be $5.46 \frac{g}{d} m^3$ at $27^\circ C$ at 2 bar pressure. What will be its density of STP?

Watch Video Solution

10. 34.5 mL of phosphorus vapour weights 0.0625g at $546^\circ C$ and 0.1 bar pressure . What is the molar mass of phosphorus?

Watch Video Solution

11. A student forgot to add the reaction mixture to the round bottomed flask at $27^{\circ}C$ but instead he/she placed the flask on the flame . After a lapse of time, he realized his mistake, and using a pyrometer the found the temperature of the flask was $477^{\circ}C$. What fraction of air would have been expelled out?

Watch Video Solution

12. Calculate the temperature of 4.0 mol of a gas occupying $5dm^3$ at 3.32 bar.

$(R = 0.083 bar dm^3 K^{-1} mol^{-1})$.

Watch Video Solution

13. Calculate the total number of electrons present in 1.4 g of dinitrogen gas.

Watch Video Solution

14. How much time would it take to distribute one Avogadro number of wheat grains, if 10^{10} grains are distributed each second?

Watch Video Solution

15. Ammonia gas diffuses through a fine hole at the rate $0.5lit\ \min^{-1}$. Under the same conditions find the rate of diffusion of chlorine gas.

Watch Video Solution

16. Find the relative rates of diffusion of CO_2 and Cl_2 gases.

Watch Video Solution

17. IF 150 mL carbon dioxide effused in 25 seconds, what volume of methane would effuse in same time.

Watch Video Solution

18. Hydrogen chrolide gas is sent into a 100 metre tube from one end 'A and ammonia gas from the other end 'B', under similar

conditions. At what distant from 'A' will be the two gases meet.

Watch Video Solution

19. Calculate the total pressure in a mixture of 8 g of dioxygen and 4 g of dihydrogen confined in a vessel of 1 dm^3 at $27^\circ C$. R=0.083 bar $dm^3 K^{-1} mol^{-1}$.

Watch Video Solution

20. Calculate the total pressure in a mixture of 3.5 g of dinitrogen 3.0 g of dihydrogen and 8.0 g dioxygen confined in vessel of 5 dm^3 at $27^\circ C$ (R=0.083 bar $dm^3 K^{-1} mol^{-1}$)

Watch Video Solution

21. Pay load is defined as the difference between the mass of displaced air and the mass of the balloon. Calculate the pay load when a balloon of radius 10 m, mass 100 kg is

filled with helium at 1.66 bar at $27^{\circ}C$. (Density of air= 1.2 kg m^{-3} and R=0.083 bar $dm^3K^{-1}mol^{-1}$)

Watch Video Solution

22. Calculate the volume occupied by 8.8 g of CO_2 at $31.1^{\circ}C$ and 1 bar pressure , R=0.083 bar $LK^{-1}mol^{-1}$.

Watch Video Solution

23. 2.9 g of a gas at 95° occupied the same volume as 0.184 g of dihydrogen at $17^{\circ}C$,at the same pressure, what is the molar mass of the gas?

Watch Video Solution

24. A mixture of dihydrogen and dioxygen at one bar pressure contains 20% by weight of dihydrogen. Calculate the partial pressure of dihydrogen.

Watch Video Solution

25. What would be the SI unit for the quantity pV^2T^2/n?

Watch Video Solution

26. In terms of Charles' law explain why $-273^\circ C$ is the lowest possible temperature.

Watch Video Solution

27. Critical temperature for carbon dioxide and methane are $31.1^{\circ}C$ and $-81.9^{\circ}C$ respectively. Which of these has stronger intermolecular forces and why?

Watch Video Solution

28. Air is cooled from $25^{\circ}C$ to $0^{\circ}C$. Calculate the decrease in rms speed of the molecules.

Watch Video Solution

29. Find the rms, most probable and average speeds of SO_2 at $27^\circ C$.

Watch Video Solution

30. Find the RMS, average and most probable speeds of O_2 at $27^\circ C$.

Watch Video Solution

31. What will the minimum pressure required to compress $500 dm^3$ of air at 1bar to $200 dm^3$ at $30^\circ C$?

Watch Video Solution

32. A vessel of 120 mL capacity contains a certain amount of gas at $35^\circ C$ and 1.2 bar pressure. The gas is transferred to another vessel of volume 180 mL at $35^\circ C$. What would be its pressure?

Watch Video Solution

33. Using the equation of state $pV = nRT$, show that at a given temperature density of a gas is proportional to gas pressure p.

Watch Video Solution

34. At $0^\circ C$ the density of a certain oxide of a gas at 2bar is same as that of dinitrogen at 5 bar, What is the molecular mass of the oxide?

Watch Video Solution

35. Pressure of 1g of an ideal gas A at $27^{\circ} C$ is found to be 2 bar. When 2g of another ideal gas B is introduced in the same flask at same temperature the pressure becomes 3 bar. Find the relationship between their molecular masses.

 Watch Video Solution

36. The drain cleaner , Drainex contains small bits of aluminium which react with caustic soda to produce dihydrogen. What volume of dihydrogen at $20^{\circ}C$ and one bar will be released when 0.15 g of aluminium reacts?

Watch Video Solution

37. What will be the pressure exerted by a mixture of 3.2 g of methane and 4.4 g of

carbon dioxide contained in a $9dm^3$ flask at $27^\circ C$?

Watch Video Solution

38. What will be the pressure of the gaseous mixture when 0.5 L of H_2 at 0.8 bar and 2.0 L of dioxygen at 0.7 bar are introduced in a 1 L vessel at $27^\circ C$?

Watch Video Solution

39. Density of a gas is found to be $5.46 \frac{g}{d} m^3$ at $27^\circ C$ at 2 bar pressure. What will be its density of STP?

Watch Video Solution

40. 34.5 mL of phosphorus vapour weights 0.0625g at $546^\circ C$ and 0.1 bar pressure . What is the molar mass of phosphorus?

Watch Video Solution

41. A student forgot to add the reaction mixture to the round bottomed flask at $27^{\circ}C$ but instead he/she placed the flask on the flame . After a lapse of time, he realized his mistake, and using a pyrometer the found the temperature of the flask was $477^{\circ}C$. What fraction of air would have been expelled out?

Watch Video Solution

42. Calculate the temperature of 4.0 mol of a gas occupying $5dm^3$ at 3.32 bar.

$(R = 0.083 bar dm^3 K^{-1} mol^{-1})$.

Watch Video Solution

43. Calculate the total number of electrons present in 1.4 g of dinitrogen gas.

Watch Video Solution

44. How much time would it take to distribute one Avogadro number of wheat grains, if 10^{10} grains are distributed each second?

Watch Video Solution

45. Ammonia gas diffuses through a fine hole at the rate $0.5lit\ \min^{-1}$. Under the same conditions find the rate of diffusion of chlorine gas.

Watch Video Solution

46. Find the relative rates of diffusion of CO_2 and Cl_2 gases.

Watch Video Solution

47. IF 150 mL carbon dioxide effused in 25 seconds, what volume of methane would effuse in same time.

Watch Video Solution

48. Hydrogen chrolide gas is sent into a 100 metre tube from one end 'A and ammonia gas from the other end 'B', under similar

conditions. At what distant from 'A' will be the two gases meet.

Watch Video Solution

49. Calculate the total pressure in a mixture of 8 g of dioxygen and 4 g of dihydrogen confined in a vessel of 1 dm^3 at $27^\circ C$. R=0.083 bar $dm^3 K^{-1} mol^{-1}$.

Watch Video Solution

50. Calculate the total pressure in a mixture of 3.5 g of dinitrogen 3.0 g of dihydrogen and 8.0 g dioxygen confined in vessel of 5 dm^3 at $27^\circ C$ (R=0.083 bar $dm^3 K^{-1} mol^{-1}$)

Watch Video Solution

51. Pay load is defined as the difference between the mass of displaced air and the mass of the balloon. Calculate the pay load when a balloon of radius 10 m, mass 100 kg is

filled with helium at 1.66 bar at $27^{\circ} C$. (Density of air= 1.2 kg m^{-3} and R=0.083 bar $dm^{3} K^{-1} mol^{-1}$)

Watch Video Solution

52. Calculate the volume occupied by 8.8 g of CO_2 at $31.1^{\circ} C$ and 1 bar pressure , R=0.083 bar $LK^{-1} mol^{-1}$.

Watch Video Solution

53. 2.9 g of a gas at 95° occupied the same volume as 0.184 g of dihydrogen at $17^\circ C$,at the same pressure, what is the molar mass of the gas?

Watch Video Solution

54. A mixture of dihydrogen and dioxygen at one bar pressure contains 20% by weight of dihydrogen. Calculate the partial pressure of dihydrogen.

Watch Video Solution

55. What would be the SI unit for the quantity pV^2T^2/n?

Watch Video Solution

56. In terms of Charles' law explain why $-273^\circ C$ is the lowest possible temperature.

Watch Video Solution

57. Critical temperature for carbon dioxide and methane are $31.1^{\circ}C$ and $-81.9^{\circ}C$ respectively. Which of these has stronger intermolecular forces and why?

Watch Video Solution

58. Air is cooled from $25^{\circ}C$ to $0^{\circ}C$. Calculate the decrease in rms speed of the molecules.

Watch Video Solution

59. Find the rms, most probable and average speeds of SO_2 at $27^\circ C$.

Watch Video Solution

60. Find the RMS, average and most probable speeds of O_2 at $27^\circ C$.

Watch Video Solution

Important Questions

1. State Boyle's law. Give its mathematical expression.

 Watch Video Solution

2. State Charles' law . Give its mathematical expression.

 Watch Video Solution

3. State Avogadro's law.

Watch Video Solution

4. What are S.T.P conditions?

Watch Video Solution

5. What is an ideal gas?

Watch Video Solution

6. Why Ideal gas equation is called Equation of State?

Watch Video Solution

7. State Graham's law of diffusion.

Watch Video Solution

8. Which of the gases diffuses faster among N_2, O_2 and CH_4? Why?

Watch Video Solution

9. How many times methane diffuses faster than sulphur dioxide?

Watch Video Solution

10. State Dalton's law of partial pressures.

Watch Video Solution

11. What is aqueous tension?

Watch Video Solution

12. What is Boltzman's constant? Give its value.

Watch Video Solution

13. What is R.M.S speed?

Watch Video Solution

14. What is average speed?

Watch Video Solution

15. What is most probable speed?

Watch Video Solution

16. Given the ratio of RMS, average and most probable speeds of gas molecules.

Watch Video Solution

17. What is compressiblity factor?

Watch Video Solution

18. Define vapour pressure of a liquid.

Watch Video Solution

19. Why pressure cooker is used for cooking food on hills?

Watch Video Solution

20. What is surface tension?

Watch Video Solution

21. What is laminar flow of liquid?

Watch Video Solution

22. Derive ideal gas equation.

Watch Video Solution

23. State and explain Graham's law of Diffusion.

Watch Video Solution

24. State and explain Dalton's law of partial pressures.

Watch Video Solution

25. State Boyle's law, Charles' law and Avogadro's law and derive ideal gas equation.

26. Deduce Graham's law from kinetic gas equation.

27. Given the ratio of RMS, average and most probable speeds of gas molecules.

Watch Video Solution

28. Write notes on Intermolecular forces

Watch Video Solution

29. State Boyle's law, Charles' law and Avogadro's law and derive ideal gas equation.

Watch Video Solution

30. Write the postulates of kinetic Molecular Theory of Gases.

Watch Video Solution

31. Derive and expalin van der Waals equation of state

Watch Video Solution

32. Write notes on the following properties of liquids

a) Vapour pressure (b) Surface tension (c) Viscosity.

Watch Video Solution

33. Name the different Intermolecular forces experienced by the molecules of a gas.

Watch Video Solution

34. State Boyle's law. Give its mathematical expression.

Watch Video Solution

35. State Charles' law . Give its mathematical expression.

Watch Video Solution

36. State Avogadro's law.

Watch Video Solution

37. STP

Watch Video Solution

38. What is an ideal gas?

Watch Video Solution

39. Why Ideal gas equation is called Equation of State?

Watch Video Solution

40. State Graham's law of diffusion.

Watch Video Solution

41. Which of the gases diffuses faster among N_2, O_2 and CH_4? Why?

Watch Video Solution

42. How many times methane diffuses faster than sulphur dioxide?

Watch Video Solution

43. State Dalton's law of partial pressures.

Watch Video Solution

44. What is aqueous tension?

Watch Video Solution

45. What is Boltzman's constant? Give its value.

Watch Video Solution

46. What is R.M.S speed?

Watch Video Solution

47. What is average speed?

Watch Video Solution

48. What is most probable speed?

Watch Video Solution

49. Given the ratio of RMS, average and most probable speeds of gas molecules.

Watch Video Solution

50. What is compressiblity factor?

Watch Video Solution

51. Define vapour pressure of a liquid.

Watch Video Solution

52. Why pressure cooker is used for cooking food on hills?

Watch Video Solution

53. What is surface tension ? Write its units.

Watch Video Solution

54. What is laminar flow of liquid?

Watch Video Solution

55. Derive ideal gas equation.

Watch Video Solution

56. State and explain Graham's law of Diffusion.

Watch Video Solution

57. State and explain Dalton's law of partial pressures.

Watch Video Solution

58. Deduce (a) Boyle's law and (b) Charles law from Kinetic gas equation.

Watch Video Solution

59. Deduce (a) Graham's law and (b) Daltons law from Kinetic gas equation.

Watch Video Solution

60. Define (a) RMS (b) average and (c) most probable speeds of gas molecules. Give their interrelationship,

Watch Video Solution

61. Write notes on Intermolecular forces

Watch Video Solution

62. State Boyle's law, Charles' law and Avogadro's law and derive ideal gas equation.

Watch Video Solution

63. Write the postulates of kinetic Molecular Theory of Gases.

Watch Video Solution

64. Derive the van der Waals equation of state. Explain the importance of van der Waals' gas equation.

Watch Video Solution

65. Write notes on the following properties of liquids

a) Vapour pressure (b) Surface tension (c) Viscosity.

Watch Video Solution

66. Name the different Intermolecular forces experienced by the molecules of a gas.

Watch Video Solution

Very Short Answer Questions

1. Name the different Intermolecular forces experienced by the molecules of a gas.

Watch Video Solution

2. State Boyle's law. Give its mathematical expression.

Watch Video Solution

3. State Charles' law . Give its mathematical expression.

Watch Video Solution

4. What are Isotherms?

Watch Video Solution

5. What is Absolute Temperature?

Watch Video Solution

6. What are Isobars?

Watch Video Solution

7. What is Absolute Zero?

Watch Video Solution

8. State Avogadro's law.

Watch Video Solution

9. What are Isochores?

Watch Video Solution

10. What are S.T.P conditions?

Watch Video Solution

11. What is Gram molar volume?

Watch Video Solution

12. What is an ideal gas?

Watch Video Solution

13. Why the gas constant 'R' is called universal gas constant?

Watch Video Solution

14. Why Ideal gas equation is called Equation of State?

Watch Video Solution

15. Give the values of gas constant is different units.

Watch Video Solution

16. How are the density and molar mass of a gas related?

Watch Video Solution

17. State Graham's law of diffusion.

Watch Video Solution

18. Which of the gases diffuses faster among N_2, O_2 and CH_4? Why?

Watch Video Solution

19. How many times methane diffuses faster than sulphur dioxide?

Watch Video Solution

20. State Dalton's law of partial pressures.

Watch Video Solution

21. Give the relation between the partial pressure of a gas and its mole fraction.

Watch Video Solution

22. What is aqueous tension?

Watch Video Solution

23. Give the two assumptions of Kinetic molecular theory of gases that do not hold good in explaining the deviation of real gases from ideal behaviour.

Watch Video Solution

24. Given the kinetic gas equation and write the terms in it.

Watch Video Solution

25. Give an equation to calculate the kinetic energy of gas molecules.

Watch Video Solution

26. What is Boltzman's constant? Give its value.

Watch Video Solution

27. What is R.M.S speed?

Watch Video Solution

28. What is average speed?

Watch Video Solution

29. What is most probable speed?

Watch Video Solution

30. What is the effect of temperature on the speeds of the gas molecules?

Watch Video Solution

31. What is the effect pf temperature on the kinetic energy of the gas molecules ?

Watch Video Solution

32. Given the ratio of RMS, average and most probable speeds of gas molecules.

Watch Video Solution

33. Why RMS speed is taken in the derivation of kinetic gas equation?

Watch Video Solution

34. What is compressiblity factor?

Watch Video Solution

35. What is Boyle's temperature?

Watch Video Solution

36. What is critical temperature? Give its value for CO_2.

Watch Video Solution

37. What is critical volume?

Watch Video Solution

38. What is critical pressure?

Watch Video Solution

39. What are critical constants?

Watch Video Solution

40. Define vapour pressure of a liquid.

Watch Video Solution

41. What are normal and standard boiling points? Give their values for H_2O.

Watch Video Solution

42. Why pressure cooker is used for cooking food on hills?

Watch Video Solution

43. What is surface tension?

Watch Video Solution

44. What is laminar flow of liquid?

Watch Video Solution

45. What is coefficient of viscosity? Give its units.

Watch Video Solution

46. Name the different Intermolecular forces experienced by the molecules of a gas.

Watch Video Solution

47. State Boyle's law. Give its mathematical expression.

Watch Video Solution

48. State Charles' law . Give its mathematical expression.

Watch Video Solution

49. What are Isotherms?

Watch Video Solution

50. What is Absolute Temperature?

Watch Video Solution

51. What are Isobars?

Watch Video Solution

52. What is Absolute Zero?

Watch Video Solution

53. State Avogadro's law.

Watch Video Solution

54. What are Isochores?

Watch Video Solution

55. STP

Watch Video Solution

56. What is Gram molar volume?

Watch Video Solution

57. What is an ideal gas?

Watch Video Solution

58. Why the gas constant 'R' is called universal gas constant?

Watch Video Solution

59. Why Ideal gas equation is called Equation of State?

Watch Video Solution

60. Give the values of gas constant is different units.

Watch Video Solution

61. How are the density and molar mass of a gas related?

Watch Video Solution

62. State Graham's law of diffusion.

Watch Video Solution

63. Which of the gases diffuses faster among N_2, O_2 and CH_4? Why?

Watch Video Solution

64. How many times methane diffuses faster than sulphur dioxide?

Watch Video Solution

65. State Dalton's law of partial pressures.

Watch Video Solution

66. Give the relation between the partial pressure of a gas and its mole fraction.

Watch Video Solution

67. What is aqueous tension?

Watch Video Solution

68. Give the two assumptions of Kinetic molecular theory of gases that do not hold

good in explaining the deviation of real gases from ideal behaviour.

Watch Video Solution

69. Given the kinetic gas equation and write the terms in it.

Watch Video Solution

70. Give an equation to calculate the kinetic energy of gas molecules.

Watch Video Solution

71. What is Boltzman's constant? Give its value.

Watch Video Solution

72. What is R.M.S speed?

Watch Video Solution

73. What is average speed?

Watch Video Solution

74. What is most probable speed?

Watch Video Solution

75. What is the effect of temperature on the speeds of the gas molecules?

Watch Video Solution

76. What is the effect pf temperature on the kinetic energy of the gas molecules ?

Watch Video Solution

77. Given the ratio of RMS, average and most probable speeds of gas molecules.

Watch Video Solution

78. Why RMS speed is taken in the derivation of kinetic gas equation?

Watch Video Solution

79. What is compressiblity factor?

Watch Video Solution

80. What is Boyle's temperature?

Watch Video Solution

81. What is critical temperature? Give its value for CO_2.

Watch Video Solution

82. What is critical volume?

Watch Video Solution

83. What is critical pressure?

Watch Video Solution

84. What are critical constants?

Watch Video Solution

85. Define vapour pressure of a liquid.

Watch Video Solution

86. What are normal and standard boiling points? Give their values for H_2O.

Watch Video Solution

87. Why pressure cooker is used for cooking food on hills?

Watch Video Solution

88. What is surface tension ? Write its units.

Watch Video Solution

89. What is laminar flow of liquid?

Watch Video Solution

90. What is coefficient of viscosity? Give its units.

Watch Video Solution

Short Answer Questions

1. State and explain Boyle's law.

Watch Video Solution

2. State and explain Charle's law.

Watch Video Solution

3. Derive ideal gas equation.

Watch Video Solution

4. State and explain Graham's law of Diffusion.

Watch Video Solution

5. State and explain Dalton's law of partial pressures.

Watch Video Solution

6. Deduce Charle's kaw from kinetic gas equation.

Watch Video Solution

7. Deduce Graham's law from kinetic gas equation.

Watch Video Solution

8. Derive an expression for kinetic energy of gas molecules.

Watch Video Solution

9. Define most probable speeds of gas molecule. Give their interrelationship.

Watch Video Solution

10. Explain the physical significance of vander Waals parameter.

Watch Video Solution

11. What is surface tension of liquids? Explain the affect of temperature on the surface tension of liquids.

Watch Video Solution

12. What is vapour pressure of liquids? How the vapour pressure of a liquid is related to its boiling point?

Watch Video Solution

13. Define viscosity and coefficient of viscosity. How does the viscosity of liquids varies with temperature.

Watch Video Solution

14. State and explain Boyle's law.

Watch Video Solution

15. State and explain Charle's law.

Watch Video Solution

16. Derive ideal gas equation.

Watch Video Solution

17. State and explain Graham's law of Diffusion.

Watch Video Solution

18. State and explain Dalton's law of partial pressures.

Watch Video Solution

19. Deduce (a) Boyle's law and (b) Charles law from Kinetic gas equation.

Watch Video Solution

20. Deduce (a) Graham's law and (b) Daltons law from Kinetic gas equation.

Watch Video Solution

21. Derive an expression for kinetic energy of gas molecules.

Watch Video Solution

22. Define (a) RMS (b) average and (c) most probable speeds of gas molecules. Give their interrelationship,

Watch Video Solution

23. Explain the physical significance of vander Waals parameter.

Watch Video Solution

24. What is surface tension of liquids? Explain the affect of temperature on the surface tension of liquids.

Watch Video Solution

25. What is vapour pressure of liquids? How the vapour pressure of a liquid is related to its boiling point?

Watch Video Solution

26. Define viscosity and coefficient of viscosity. How does the viscosity of liquids varies with temperature.

Watch Video Solution

Long Answer Questions

1. Write notes on Intermolecular forces

Watch Video Solution

2. State Boyle's law, Charles' law and Avogadro's law and derive ideal gas equation.

Watch Video Solution

3. Write notes on diffusion of Gases.

Watch Video Solution

4. State and explain Dalton's law of partial pressures.

Watch Video Solution

5. Write the postulates of kinetic Molecular Theory of Gases.

Watch Video Solution

6. Derive the gas laws from the kinetic gas equation.

Watch Video Solution

7. Explain Maxwell-Boltzmann distribution curves of molecular speeds and give the important conclusions. Discuss the effect of temperature on the distribution of molecular speeds.

Watch Video Solution

8. What are the reasons for deviations from ideal gas behaviour ?

Watch Video Solution

9. Derive and expalin van der Waals equation of state

Watch Video Solution

10. Explain the liquefication of gases.

Watch Video Solution

11. Write notes on the following properties of liquids

a) Vapour pressure (b) Surface tension (c) Viscosity.

Watch Video Solution

12. Write notes on Intermolecular forces

Watch Video Solution

13. State Boyle's law, Charles' law and Avogadro's law and derive ideal gas equation.

Watch Video Solution

14. Write notes on diffusion of Gases.

Watch Video Solution

15. State and explain Dalton's law of partial pressures.

Watch Video Solution

16. Write the postulates of kinetic Molecular Theory of Gases.

Watch Video Solution

17. Derive the gas laws from the kinetic gas equation.

Watch Video Solution

18. Explain Maxwell-Boltzmann distribution curves of molecular speeds and give the important conclusions. Discuss the effect of temperature on the distribution of molecular speeds.

Watch Video Solution

19. A real gas deviates most from ideal behaviour at

Watch Video Solution

20. Derive the van der Waals equation of state. Explain the importance of van der Waals' gas equation.

Watch Video Solution

21. Explain the liquefication of gases.

Watch Video Solution

22. Write notes on the following properties of liquids

a) Vapour pressure (b) Surface tension (c) Viscosity.

Watch Video Solution