CHEMISTRY

BOOKS - VGS PUBLICATION-BRILLIANT

MATTER AROUND US

Exercise

1. Explain diffusion phenomenon based on the states of matter. (AS_1)

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2. Why do gases diffuse faster than solids or liquids ?

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3. What is diffusion? Explain diffusion in liquids and gases with suitable examples,

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4. Mention the properties of solids (AS_1)

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5. Mention the properties of liquids (AS_1)

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6. Explain 'fluid' with one example.

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7. Mention the properties of gases (AS_1)

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8. Give two daily life situation where you observe the diffusion (AS_1)

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9. Mention the applications of compressibility in our daily life,

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10. Mention the situations where we use diffusion in our day-to-day life.

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11. How can we smell perfume sitting several meters away from the source? (AS_1)

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12. How do you prove that the speed of diffusion of ammonia is more than that of the speed of diffusion of hydrochloric acid? (AS_3)

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13. Give examples that the matter which will be available in different states. (AS_1)

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14. We can't rejoin the broken chalk easily. Give reason. (AS_1)

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15. Is the space between the particles in the matter influence the speed of diffusion? Explain. (AS_2)

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16. Which of the following is available in three states in our daily life (at normal conditions)

A. Petrol

B. Water

C. Milk

D. Kerosene

Answer:

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17. Which of the following can be easily compressed of less volume?

A. Iron

B. Water

C. Air

D. Wooden piece

Answer:

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18. Conduct an experiment to observe the speed of diffusion of two substances.

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19. Do you think, all the substances have the rate of diffusion is same? Suggest one experiment to support your answer.

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20. Describe an experiment to observe the speed of diffusion of two gases.

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21. Conduct an experiment to show the space between the particles of matter and write the report.

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22. Make a model to explain the structure of particles in solids, liquids and gases.

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23. What are the factors influencing diffusion, whether the arrangement of atoms in the substance that diffuse or the arrangement of atoms of the medium in which the substance is kept.

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24. Some solids diffuse in liquids but not in gases, some solids diffuse in gases but not in liquids. Why?

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25. Prove that the shape of the liquid depends on the shape of the container.

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26. Do the liquids have fixed shape? Suggest an experiment to support your answer.

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27. Prove that the liquids have no fixed shape.

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28. Do the liquids have fixed volume? Suggest an experiment to support your answer.

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29. Prove that the liquids have fixed volume.

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30. Do the gases have a definite shape and a fixed volume?

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31. What is CNG? What is its use?

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32. Does CNG have a fixed volume ?definite shape ?

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33. Does CNG have a fixed volume ?definite shape ?

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34. In which state that the substances doesn't have fixed shape and volume ? Give one example.

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35. Prove that the gases are highly compressible than liquids and solids.

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36. Explain the compressible property in air, water and piece of wood with one experiment.

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37. Write an activity which shows the rate of diffusion of liquids.

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38. What will happen when potassium permanganate crystals ($KMnO_4$) added to water?

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39. Some solids diffuse in liquids but not in gases, some solids diffuse in gases but not in liquids. Why?

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40. Do the solid substances diffuse in liquid? Suggest one experiment to support your answer.

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41. What will happen when potassium permanganate crystals ($KMnO_4$) added to water?

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42. How small are the particles of matter?

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43. When we added crystals of potassium permanganate to the water, the colour of water will be changed. What will be the reason for it?

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44. Are you able to break the stream of water anywhere from the top to ground ? Can you break the stream permanently or momentarily ? What is the reason behind the stream of water remaining together ?

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45. Is rubber band solid or liquid? Why? (What will happen if the stretching is stopped ? What will happen if the stretching is too much?) Let

us stretch a rubber band. Is there a change in its shape?

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46. Is rubber band solid or liquid ? why?

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47. Take some finely powdered salt (not crystals) and keep it in two different jars.Which shape does the powdered salt take?

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48. Can you say that salt is a liquid on the basis of change in its shape? Justify your answer.

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49. Take a sponge. Observe its shape.Can you compress it? Is it a solid? Why? Think. Is

anything coming out from the sponge when it is compressed.

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50. Why can't you able to compress a wooden block?

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51. Why can't you able to compress a wooden block?

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52. Is there any substance which can be found in three states like water ?

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53. What are the properties that lead us to consider petrol or tea as liquids ?

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54. Do solids have definite shape and fixed volume ?

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55. What is the shape of the water in different containers ?

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56. What shape does the water take if it spill on the floor ?

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57. Are the levels of water and milk same ?

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58. Can you guess the volume of oil ?

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59. Does CNG have a fixed volume ?definite shape ?

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60. Does CNG have a fixed volume ?definite shape ?

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61. Does the smell from burning incense stick and deodorant spray reach someone on the other end at the same time?

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62. When does water change into ice and then into vapour?

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63. Why do gases diffuse faster than solids or liquids ?

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64. What is matter? How many state of matter are there? What are they?

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65. Compare the following properties of solids, liquids and gases. a) Shape b) Volume c) Compressibility d) Diffusion

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66. Why do gases diffuse faster than solids or liquids ?

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67. What are the general properties of matter?

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68. What is fluid? Give examples.

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69. What is diffusion? Give example.

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70. Rate of diffusion of gases is higher than that of liquids or solids. Why?

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71. Which factors determine the state of a substance?

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72. How can you change the state of a substance?

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73. What is CNG? What is its use?

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74. Write decreasing order of the distance between the atoms of solid, liquid and gas.

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75. Why are the gases and liquids called fluids?

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76. Rate of diffusion is higher in

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77. What is compression?

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78. What are fluids?

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79. Purna Chandra does not recognise the difference between solids and liquids. Prepare some questions, by which he can understand the differences between them.

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80. The movement of vapours of smoke from incense stick is known as -

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81. Draw a diagram showing the arrangement of particles in solids, liquids and gases.

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82. “Same volume of liquid having different shapes”. Show this statement by drawing.

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83. How does diffusion helps to survive the animals and plants in daily life?

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84. How do you appreciate the process of diffusion?

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85. Which of the following is more compressible?

A. wood

B. air

C. Water

D. sponge

Answer:

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86. Powdered salt is a

A. solid

B. liquid

C. gas

D. none

Answer:

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87. Rate of diffusion is high in

A. ink drop

B. $KMnO_4$ solution

C. oxygen

D. $KMnO_4$ crystal

Answer:

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88. Which of the following is true in case of particles of matter?

A. tiny

B. have space between them

C. have force of attraction between them

D. all the above

Answer:

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89. The reason for high rate of diffusion in gas is

A. higher speed of gas particles

B. greater space between gas particles

C. both A and B

D. none

Answer:

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90. Matter occupies ..... and has .....

A. length, mass

B. space, mass

C. mass, space

D. none of these

Answer:

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91. Do solids have definite shape and fixed volume ?

A. solids

B. liquids

C. gas

D. none of these

Answer:

92. The state of matter which get the shape of container is .....

A. solid

B. liquid

C. gas

D. plasma

Answer:

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93. Liquids can flow easily from one place to another. So they are called .....

A. rigid substances

B. floaters

C. fluids

D. volatile

Answer:

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94. Do solids have definite shape and fixed volume ?

A. Solid

B. Liquid

C. Gases

D. Plasma

Answer:

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95. CNG stands for .....

A. Central Natural Gas

B. Central Nano Gas

C. Compressed Natural Gas

D. Conditional Natural Gas

Answer:

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96. Liquids have a fixed -

A. Solids

B. Liquids

C. Gases

D. None of these

Answer:

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97. Decrease in the volume of same quantity of gas under pressure is known as .....

A. compressibility

B. rigidity

C. expansion

D. contraction

Answer:

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98. Expand LPG .....

A. Litre Petroleum Gas

B. Longitudinal Petroleum Gas

C. Latitudinal Petroleum Gas

D. Liquefied Petroleum Gas

Answer:

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99. How do you verify experimentally that the gases are highly compressible as compared to liquids and solids?

A. Liquids

B. Gases

C. Solids

D. Both A & B

Answer:

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100. The movement of vapours of smoke from incense stick is known as -

A. diffusion

B. compressibility

C. rigidity

D. evaporation

Answer:

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101. The rate of diffusion, is

A. solids

B. liquids

C. gases

D. none of these

Answer:

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102. All matter is made up of .....

A. very large particles

B. large particles

C. small particles

D. tiny particles

Answer:

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103. Particles of matter have some ..... between them.

A. weight

B. mass

C. space

D. volume

Answer:

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104. On dissolving solid in liquid, ... particles enter into space between the ..... particles.

A. solid, liquid

B. liquid, liquid

C. liquid, solid

D. solid, solid

Answer:

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105. Particles of matter have ..... between them that keeps the particles together.

A. force of repulsion

B. force of attraction

C. both

D. none of these

Answer:

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106. Diffusion is possible only when the particles of matter .....

A. are stationary

B. move continuously

C. both

D. none of these

Answer:

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107. Space between the particles is very high in .....

A. solid

B. liquid

C. gas

D. none of these

Answer:

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108. Rate of diffusion of gases is very high because ..... and ..... of gas particles.

A. lower speed, least space

B. higher speed, least space

C. higher speed, greater space

D. lower speed, greater space

Answer:

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109. Assertion (A) : Salt crystal is not solid

Reason (R) : Shape of the salt crystals is depending on the shape of the container.

A. ‘A’ and ‘R’ are true and ‘R’ is a correct explanation of ‘A’

B. ‘A’ and ‘R’ are true and ‘R’ is not a correct explanation of ‘A’

C. ‘A’ is false and ‘R’ is true

D. ‘A’ and ‘R’ are false

Answer:

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110. Assertion (A) : Smell of petrol can identify from some distance. Reason (R) : Solids diffuse in liquid.

A. 'A' and 'R' are true and 'R' is a correct explanation of 'A'

B. 'A' and 'R' are true and 'R' is not a correct explanation of 'A'

C. 'A' is false and 'R' is true

D. 'A' and 'R' are false

Answer:

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111. Which of the following statement is true A. During respiration oxygen diffuses from lungs into blood. B. During respiration carbon dioxide diffuses from blood to lungs.

A. A only

B. B only

C. A and B

D. None

Answer:

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112. Who is correct ? Sailaja : NH_3 diffuses faster than HCL. Lalitha : HCL diffuses faster than NH_3

A. Sailaja

B. Lalitha

C. Both

D. None

Answer:

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113. Which of the following is a false statement?

A. There exists space between particles in gases

B. Particles of matter attracts each other.

C. Particles of solids are bigger than that of gas particles

D. None

Answer:

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114. Which of the following statement is true

Poornima : Solids, liquids and gases diffuse

into liquids. Sheshu : Rate of diffusion of gases is higher than that of liquids or solids.

A. Poornima

B. Sheshu

C. A and B

D. None

Answer:

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115. Assertion (A) : Rate of diffusion of gases is higher than that of liquids or solids. Reason (R_1) : There is a greater space between gas particles in gases. Reason (R_2) : Speed of gas particles in gas is more than that of liquids or solids.

A. R_1

B. R_2

C. R_1 and R_2

D. Neither R_1 nor R_2

Answer:

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116. Milk : Liquid :: Curd : .....

A. Solid

B. Liquid

C. Gas

D. Plasma

Answer:

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117. By the given conversation guess the substance 'A'. Srilatha : Does 'A' possess fixed volume? Susheela : Yes. Srilatha : Does 'A' possess fixed shape? Susheela : No

A. Solid

B. Liquid

C. Gas

D. 'B' or 'C'

Answer:

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118. What shape does the water take if it spill on the floor ?

A. circle

B. line

C. triangular

D. we cannot say

Answer:

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119. One litre of water can fill in cylinder A and two litres of water can fill in cylinder B. Then two litres of gas can fill in

A. cylinder A

B. cylinder B

C. both 'A' and 'B'

D. not possible

Answer:

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120. The force of attraction between the particles is maximum in -

A. liquid

B. gas

C. solid

D. none

Answer:

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121. Oxygen and Carbon dioxide from atmosphere diffuse and dissolve in water is essential for survival of.....

A. human beings

B. land animals

C. birds

D. aquatic animals

Answer:

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122. When Hydrogen chloride gas and Ammonia gas diffuse in a long glass tube and react with each other to give white fumes of Ammonium Chloride, which gas travelled faster ?

A. Ammonia

B. Hydrogen chloride

C. Both travel with same speed

D. None of these

Answer:

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123. Generally, the given instrument is not suitable to measure solids.

A. Simple balance

B. Measuring jar

C. Spring balance

D. None

Answer:

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124. Take water into a syringe, close the hole at the nosil and push the piston. By this experiment you can conclude that

A. Liquids are compressible

B. Liquids are not compressible

C. Liquids contain space between their particles

D. Liquids do not contain space between their particles

Answer:

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125. These substances are required to prove that the speed of diffusion is different for different substances.

A. Test tube, potassium permanganate, water

B. Flask, copper sulphate, water

C. Long glass tube, cotton, HCL, NH_3

D. Long glass tube, $CuSO_4$ Sol., $ZnSO_4$ Sol.

Answer:

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126. The gas that diffuses from lungs into blood is .....

A. oxygen

B. carbon dioxide

C. water vapour

D. hydrogen

Answer:

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127. The gas that diffuses from blood into lungs is .....

A. oxygen

B. carbon dioxide

C. water vapour

D. hydrogen

Answer:

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128. Water, milk, oil, stone, wood, rainbow, book, clouds, smoke. Which of the above is odd one?

A. clouds

B. rainbow

C. water

D. smoke

Answer:

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129. A is liquid B is solid C is gas Which of the above has both fixed shape and volume?

A. A

B. B

C. C

D. A and B

Answer:

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130. What is the boiling point of water H_2O at 0° - State (A) H_2O at 100° - State (B) H_2O at 80° - State (C)

A. State (A)

B. State (B)

C. State (C)

D. None

Answer:

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131. LPG cylinders are very appreciable because

A. LPG has no fixed shape

B. LPG has fixed volume

C. LPG is compressible

D. LPG is not compressible

Answer:

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132. Is rubber band solid or liquid? Why? (What will happen if the stretching is stopped ? What will happen if the stretching is too much?) Let us stretch a rubber band. Is there a change in its shape?

A. solid

B. liquid

C. gas

D. none

Answer:

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133. Sponge is a

A. solid

B. liquid

C. gas

D. none

Answer:

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