



CHEMISTRY

BOOKS - MODERN PUBLICATION

GROUP 18 ELEMENTS

Exercise

1. Which is monoatomic:

A. *He*

B. H

C. CO

D. O_2

Answer: D



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2. Shape of XeF_4 is

A. XeO_3 and $CaCO_3$

B. XeO_2 and $CaCN_2$

C. XeF_3 and $CaCN_2$

D. XeF_2 and $CaCO_2$

Answer: C



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3. Which transition elements exhibit +8 oxidation state ?

A. high chemical activity

B. low chemical activity

C. much paramagnetic properties

D. less diamagnetic properties

Answer: C



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4. Which of the following is a life saving mixture for asthma patients ?

A. mixture of helium and oxygen

B. mixture of neon and oxygen

C. mixture of neon and nitrogen

D. mixture of argon and oxygen

Answer: A



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5. Which of the following statement is not correct ?

A. helium has lowest B.P.

B. argon is used in electric bulbs.

C. Krypton is obtained during radioactive disintegration

D. Xe forms XeF_6

Answer: B



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6. Which noble gas is most soluble in water ?

A. *He*

B. *Ar*

C. Ne

D. Xe

Answer: A



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7. Total number of lone pair of electrons in

$XeOF_4$ is:

A. 0

B. 1

C. 2

D. 3

Answer: B



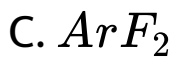
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8. Which one of the following does not exist ?

Why ? $XeOF_4$, NeF_2 , XeF_2 , XeF_6

A. $XeOF_2$

B. $XeOF_4$

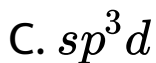
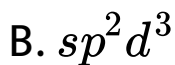
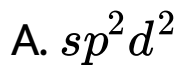


Answer: B



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9. Give the structure of XeF_6 .



D. sp^2

Answer: A



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10. Hybridisation of Xe in XeF_4 , is

A. sp

B. sp^2

C. sp^3d

D. sp^3d^2

Answer: D



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11. Which pentafluorides cannot be formed ?



Answer: C



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12. Which is the strongest base among the following

A. He

B. Xe

C. Ar

D. Ne

Answer: B



13. $XeOF_4$

- A. Octahedral
- B. square pyramidal
- C. pyramidal
- D. t-shaped

Answer: C



14. In XeF_2 , $x eF_4$ and XeF_6 the number of lone pairs and Xe is respectively.

A. 2,3,1

B. 1,2,3

C. 4,1,2

D. 3,2,1

Answer: C



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15. Argon was discovered by:

A. Rayleigh

B. Ramsay

C. Lockerey

D. none of these

Answer: D



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16. Which of the following noble gases is the least polarisable ?

A. *Kr*

B. *Ar*

C. *Ne*

D. *He*

Answer: D



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17. Which of the following noble gases is abundant in air ?

A. *Kr*

B. *Ar*

C. *Rn*

D. *Xe*

Answer: B



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18. Which of the following noble gases is abundant in air ?

A. *Rn*

B. *Kr*

C. *Ne*

D. *Ar*

Answer: B



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19. Noble gases are:

- A. multiple bonding
- B. co-ordinate bonding
- C. covalent bonding
- D. hydrogen

Answer: C



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20. Give the structure of XeF_6 .

A. linear

B. distorted octahedral

C. square pyramidal

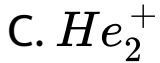
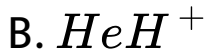
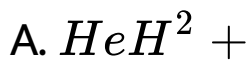
D. pyramidal

Answer: B



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21. Which one of the following is not present in RNA ?



Answer: A



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22. Helium is used in gas balloons instead of hydrogen because :

A. incombustible

B. radioactive and detected easily

C. lighter than hydrogen

D. more abundant than hydrogen

Answer: A



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23. The first viral disease detected in human being was :

A. helium

B. neon

C. Krypton

D. xenon

Answer: D



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24. Xenon best reacts with :

A. the most electropositive element

B. the most electronegative elements

C. the hydrogen halides

D. non metals

Answer: A



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25. Which of the following is not known:

A. KrF_6

B. XeF_2

C. XeO_3

D. KrF_2

Answer: C



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26. What do the sea divers use ?

A. it is less soluble in blood than nitrogen
at high pressures

B. it is lighter than nitrogen

C. it is readily miscible with oxygen

D. it is less poisonous than nitrogen

Answer: D



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27. in XeO_3 Xe is:

A. 0

B. 2

C. 4

D. 3

Answer: B



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28. The ionisation potential of hydrogen atom is 13.6 eV than that of He^+ ion will be:

A. 54.4eV

B. 6.8eV

C. 13.6eV

D. 24.5eV

Answer: D



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29. Which of the following base is not present in DNA?

A. *He*

B. *Ne*

C. *Ar*

D. Rn

Answer: C



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30. Which inert gas was discovered in semi atmosphere ?

A. Argon

B. Xenon

C. Neon

D. Helium

Answer: D



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31. In the clathrates of xenon with water, the nature of bonding between xenon and water molecules is:

A. covalent

B. hydrogen bonding

C. co-ordination

D. ce pole induced dipole

Answer: B



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32. The coloured discharge tubes for advertisement contain

A. Xeon

B. Helium

C. Neon

D. Argon

Answer: C



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33. XeF_6 on complete hydrolysis gives

A. XeF_2

B. $XeOF_2$

C. $XeOF_4$

D. XeO_3

Answer: A



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34. The number of unpaired electrons in Mn^+

is:

A. zero

B. 8

C. 4

D. 18

Answer: D



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35. Deep sea dives respire in a mixture of

A. O_2 and He

B. O_2 and Ar

C. O_2 and CO_2

D. CO_2 and Ar

Answer: B



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36. $XeOF_4$

- A. octahedral
- B. square pyramidal
- C. pyramidal
- D. T-shaped

Answer: B



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37. The most abundant noble gas present in the atmosphere is _____.

A. *He*

B. *Ne*

C. *Ar*

D. *Kr*

Answer: A



38. AIDS is due to

A. inertness

B. high polarisability

C. weak van der Waal's force between the
atoms

D. small size

Answer: D



39. In XeF_2 , XeF_4 and XeF_6 the number of lone pairs on Xe is respectively.

A. 2,3,1

B. 1,2,3

C. 4,1,3

D. 3,2,1

Answer: D



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40. Tear gas is

A. He

B. Hel

C. $Hell$

D. He_2^3

Answer: D



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41. Explain the

The bond angle in PH_3 is less than that of NH_3 .

A. 107°

B. 119°

C. 92°

D. 103°

Answer: B



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42. How does acetone react with (i) PCl_5 (ii)

C_2H_5OH (iii) $LiAlH_4$

A. (I) and (iv)

B. (I) and (ii)

C. (ii) and (iii)

D. (iii) and (iv)

Answer: B



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43. The gas used for inflating the tyres of aeroplanes is:

A. H_2

B. He

C. Ne

D. Ar

Answer: A



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44. Which of the following noble gases is the least polarisable ?

A. *He*

B. *Ne*

C. *Kr*

D. *Ke*

Answer: A



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45. Which noble gas does not form clathrates:

A. *Xe*

B. *Kr*

C. *Rn*

D. *He*

Answer: D



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46. Ionisation potential of noble gases are ____.



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47. Noble gases have ___ electron affinity



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48. Noble gases have ___ M.P. and B.P.



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49. Hybridisation of Xenon in Xenon tetrafluoride is ____.



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50. Hybridisation of Xenon in Xenon hexafluoride is ____.



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51. Shape of XeF_6 molecule is ____.



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52. Zero group elements are inert due to_____.



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53. Zero group elements are monoatomic due to_____.



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54. ___ inert gas is most abundant in air.



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55. Group 16 elements are



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56. The outer electronic configuration of 15 group



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57. Give the hybridisation of Xe in XeF_2 , XeF_4 and $XeOF_4$.



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58. Noble gases are:



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59. Shape of XeF_4 is





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60. Give the structure of XeF_6 .



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61. Freon is used as :



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62. Give the structure of XeF_6 .





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63. Radon was discovered by :



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64. Hypo is used in:



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65. Acetone is used as a ____ and ____.





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66. Why do noble gases form compounds with flourine and oxygen only ?



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67. Why do noble gases form compounds with flourine and oxygen only ?



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68. Write a short account of the fluorides of xenon stating their preparation and properties .



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69. The word argon means



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70. Which inert gas contains less than eight electrons in its outer shell ? What is its atomic

number ? Write down its electronic configuration .



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71. how many electrons are present in 1C of electricity?



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72. What are the sources of rare gases ?



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73. Noble gases are:



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74. FSH is formed by:



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75. Which Noble gas is not found in atmosphere



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76. Which of the noble gases is radioactive ?



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77. Which noble gas is used in radiotherapy ?



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78. Physical properties of :



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79. Which noble gas has the highest ionisation energy ?



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80. What is the value of $\frac{C_P}{C_V}$ for noble gases ?



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81. Name the 1st compound of a noble gas reported by Bartlett.



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82. Noble gases do not occur in:



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83. Which inert gas is not found in atmosphere ?



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84. Which inert gas is used for welding of aluminium and chromium ?



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85. Which gas is used in glow sign tube ?



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86. Which inert gas is used in beacon lights?



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87. Which gas is filled in electric bulbs/tubes:



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88. What is nature of hybridisation in XeF_4 ?



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89. Give the structure of XeF_6 .



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90. Write the reaction between XeF_2 and KF ?



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91. What is the relation between thermal capacity and water equivalent of a body.



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92. Write the reaction between XeF_2 and KF ?



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93. What is nature of hybridisation in XeF_4 ?



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94. Noble gases are:



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95. What is the shape of XeF_2 molecule ?



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96. Write one use of $KClO_3$



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97. Comment on risk of indiscriminate use of drugs and antibiotics.



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98. What is molecular geometry of XeO_3 ?



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99. Which of the following noble gases is the least polarisable ?



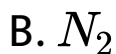
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100. Which noble gas is not easily to liquefy



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101. Which gas can be collected over water?



Answer:



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102. Which noble gas is called as Lazy gas?



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103. Which inert gas is not found in atmosphere ?



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104. Explain with reason : Electronegativity values of inert gases are zero.



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105. What is average life and its percentage of argon in air ?



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106. What are the sources of rare gases ?



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107. Noble gases are:



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108. Noble gas atoms have very high ionization energies. Explain.



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109. What is the shape of XeF_2 molecule ?



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110. The shape and hybridisation of XeF_4 is



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111. Mention two uses of Neon gas.



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112. How XeF_2 is prepared?



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113. How XeF_4 is prepared ?



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114. Write some uses of argon.



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115. Xenon forms fluoride easily. Explain.



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116. Write four characteristic properties of noble gases.



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117. What happens when H_2O_2 reacts with Cl_2 ?



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118. Draw the structure of the following of the following compounds.

(i) 2,2-dimethyl-1-bromobutane

(ii) 2,2,4,4-tetramethylhexane



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119. Noble gases are:



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120. Why is helium used in diving apparatus ?



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