



# CHEMISTRY

## BOOKS - SHARAM PUBLICATION

### GROUP 18 ELEMENTS

#### Exercise

1. Which of the following statement is not correct ?

A. He has the lowest boiling point among the noble gases

B. Argon is used in electric bulbs.

C. Krypton is obtained during radio active disintegration

D.  $Xe$  forms  $XeF_6$

**Answer:**



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2. When electric discharge is passed through neon at low pressure the colour of the glow is

A. red

B. green

C. yellow

D. orange

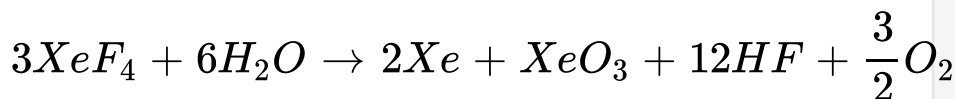
**Answer:**

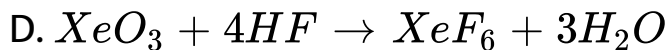
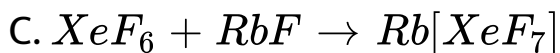
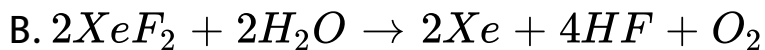


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3. Which of the following reactions of Xenon compounds are not feasible ?

A.





**Answer:**



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4.  $XeF_4$  and  $XeF_6$  are expected to be

A. Oxidising

B. Reducing

C. Strongly basic

D. Unreactive

**Answer:**



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5. Argon is used in welding because of its

- A. low reactivity with metals
- B. Ability to lower m.p of metals.
- C. Flammability
- D. high chloric value

**Answer:**



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6. What is the shape of  $XeF_4$  molecule ?

- A. Tetrahedral
- B. Squar planar
- C. Octahedral
- D. trigonal

**Answer:**



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7. Which of the following gases does not have eight electrons in the valence shell ?

A. *Kr*

B. *He*

C. *Ne*

D. *Ar*

**Answer:**



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8. Which type of bond is present in *Xe* molecule ?

A. Covalent

B. Ion - dipole

C. vander Waal's

D. dipole - dipole

**Answer:**



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

A. Helium and Oxygen



B. Neon and nitrogen

C. Ne and oxygen

D. Argon and Oxygen

**Answer:**



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**10.** How many lone pairs are present in  $XeF_2$  ?

A. 1

B. 2

C. 3

D. 4

**Answer:**



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**11.** The coloured discharge tubes for advertisement contain

A. Xenon

B. Helium

C. Argon

D. Neon

**Answer:**



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**12.** The inert gas abundantly found in atmosphere is

A. *Xe*

B. *Kr*

C. *Ar*

D. *He*

**Answer:**



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13. Which of the following noble gases has the highest positive electron gain enthalpy value ?

A. *He*

B. *Kr*

C. *Ne*

D. *Xe*

**Answer:**



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14. In the preparation of compounds of Xe, Bartlett had taken ..... as a base compound.

A. both  $O_2$  and  $Xe$  have same size

B. both  $O_2$  and  $Xe$  have same electron gain enthalpy.

C. both  $O_2$  and  $Xe$  have almost same ionisation enthalpy

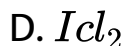
D. both  $Xe$  and  $O_2$  are gases

**Answer:**



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15.  $XeF_2$  is iso structural with



**Answer:**



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16. Which of the following has maximum number of lone pairs associated with  $Xe$



**Answer:**



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17. Which of the following noble gases is used in miner 's cap lamps ?



B.  $Ne$

C.  $Ar$

D.  $Kr$

**Answer:**



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**18.** Noble gases are chemically inert because

A. they have stable electronic configuration

B. they have low ionization potential

C. they have low electro negativities



D. they are electrically neutral

**Answer:**



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**19.** Unlike Xenon, Neon cannot form any oxide or fluoride because

A. it is more stable than Xenon

B. Its radius is more than that of Xenon

C. Neon has no vacant d - orbital

D. The ionization potential of neon is less than that of Xenon.

**Answer:**



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**20.** Which inert gas is used in beacon lights?

A. *Ne*

B. *Ar*

C. *Kr*

D. *Xe*

**Answer:**

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**21.** Give two uses of  $XeF_2$ .

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**22.** Which noble gas is used for treatment of cancer ?

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23. Write the state of hybridisation of  $Xe$  in the following compounds.



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24. Write the state of hybridisation of  $Xe$  in the following compounds.



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25. Write the state of hybridisation of  $Xe$  in the following compounds.



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26. Write the state of hybridisation of  $Xe$  in the following compounds.



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27. Which rare gas is used in gas thermometers for low temperature measurement ?

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28. What is the atomicity of inert gas atoms and why ?

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29. Who is known as father of noble gases ?

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30. Name the noble gas having least boiling point.

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31. Name the molecular geometry of  $XeOF_4$ .

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32. What is formed when  $XeF_6$  is hydrolysed ?

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33. Which inert gas is used for inflating tyres ?



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**34.** What was the first noble gas compound and who prepared it?

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**35.** Give the increasing order of abundance of the noble gases in air by volume.

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**36.** Name the radioactive element among noble gas.



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37. Which inert gas was discovered in semi atmosphere ?

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38. What is the geometry of  $XeF_4$  molecule ?

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39. Mention two uses of Neon gas.

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40. Give the structure of  $XeF_6$  . Which inert gas has highest ionization energy ?



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41. The inert gas abundantly found in atmosphere is



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42. Who discovered Radon.



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43.  $XeF_6$  on complete hydrolysis gives:

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44. Give the shape of



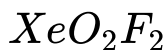
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45. Give the shape of



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**46.** Give the shape of



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**47.** What do the sea divers use ?



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**48.** Name two scientists associated with discovery of noble gasses.



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49. 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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50. Give a method of preparation of  $XeF_4$ .

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51. Mention one use of each of four noble gases .

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52. What are the causes of chemical inertness of noble gases ?

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53. Give the structure of  $XeF_6$  .

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54. Name the zero group elements and give their atomic numbers .

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55. Explain why  $XeF_6$  cannot be stored in glass vessels ?

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56. Xenon does not form fluorides such as  $XeF_3$  and  $XeF_5$  Why ?

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57. Majority of noble gas compounds are those of Xenon. Explain.

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**58.** Why the noble gases , in general , are chemically inert ?

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**59.** Why is neon generally used for warning signals ?

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**60.** Nobles gases are placed in zero group .Explain.

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61. Explain why Xenon is mono atomic.

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62. What is the nature of hybridisation and shape of  $XeF_2$ .

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63. The shape and hybridisation of  $XeF_4$  is

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64. Why do not helium and neon form clathrates with quinol ?

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65. What are zero group elements ? Give the electronic configuration of the first four of them. Why zero group elements are also known as inert gases ?

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66. Give the preparation and structure of  $XeF_6$  and also mention its two uses.

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67. Give a method of preparation of  $XeF_2$ . Give the reaction with  $H_2$  and  $H_2O$ .



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68. How is  $XeF_4$  prepared . How does it react with  $SF_4$  and hydrogen ?



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