



MORE QUESTIONS SOLVED

I. Very Short Answer Type Questions

Question 1. Which isotope of hydrogen is radioactive?

Answer: Tritium.

Question 2. What is the importance of heavy water with regard to nuclear power generation ?

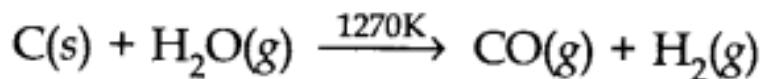
Answer: It is used as a moderator and helps to control the nuclear reaction.

Question 3. What is zeolite?

Answer: It is hydrated sodium aluminium silicate, $\text{Na}_2\text{Al}_2\text{Si}_2\text{O}_8 \cdot x\text{H}_2\text{O}$.

Question 4. What is water gas? How is it prepared?

Answer: Mixture of CO and H_2 in the ratio of 1 : 1 is called water gas. It is prepared by passing steam over red hot coke.



Question 5. Write two uses of interstitial hydrides.

Answer: (i) In the storage of H_2 .

(ii) Catalyst for hydrogenation reaction.

Question 6. Give an example of an ionic hydride and a covalent hydride:

Answer: NaH is an ionic hydride and B_2H_6 is a covalent hydride.

Question 7. Give two advantages of using hydrogen over gasoline as a fuel.

Answer:

- High heat of combustion
- It is pollution free.

Question 8. What type of elements form interstitial hydrides?

Answer: d-block and f-block elements.

Question 9. What is perhydrol?

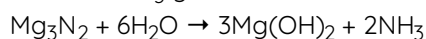
Answer: Perhydrol is the trade name of H_2O_2 . It is used as an antiseptic.

Question 10. What is meant by hard water?

Answer: Water which does not produce lathers with soap is known as hard water. Hardness is due to the presence of bicarbonates, sulphates and chlorides of Ca^{2+} and Mg^{2+} .

Question 11. Which gas is evolved when Mg_3N_2 (Magnesium nitride) is treated with H_2O ? Give chemical reaction.

Answer: NH_3 gas is evolved.



Question 12. Which compounds cause temporary hardness of water?

Answer: $\text{Ca}(\text{HCO}_3)_2$ and $\text{Mg}(\text{HCO}_3)_2$

Question 13. Which isotope of hydrogen does not have neutron ?

Answer: ^1_1H does not have neutron. It is called protium.

Question 14. Name a substance which can oxidise H_2O_2

Answer: Acidified KMnO_4 .

Question 15. Which type of hydrides are generally non-stoichiometric in nature?

Answer: Interstitial hydrides are non-stoichiometric in nature.

Question 16. What is the cause of bleaching action of H_2O_2 ?

Answer: $\text{H}_2\text{O}_2(\text{l}) \rightarrow \text{H}_2\text{O}(\text{l}) + \text{O}(\text{g})$

Nascent oxygen produced is responsible for bleaching action.

Question 17. What is the use of hydrogen in the manufacture of Vanaspati Ghee?

Answer: H_2 is used as reducing agent to convert vegetable oil into vegetable ghee.

Question 18. Name the phenomenon of adsorption of hydrogen on metal surface.

Answer: Occlusion.

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