



CHEMISTRY

BOOKS - ARIHANT PUBLICATION

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WATER

Exam Booster For Cracking Exam

1. Which of the following is best conductor of electricity ?

A. Sea water

B. Rain water

C. Ordinary water

D. Distilled water

Answer: A



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2. Heavy water is

A. deuterium oxide

B. tritium oxide

C. rain water

D. water at $4^{\circ}C$

Answer: A



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3. Density of heavy water is

A. more than that of ordinary water

B. equal to that of ordinary water

C. less than that of ordinary water

D. none of the above

Answer: A



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4. permanent hardness of water may be removed by the addition of

A. potash alum

B. lime

C. sodium carbonate

D. potassium permanganate

Answer: C



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5. Anti-freeze is a mixture of

A. acetic acid and water

B. formic acid and water

C. methyl alcohol and water

D. ethyl alcohol and water

Answer: D



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6. Water is a highly effective coolant for a car engine because

A. water boils at a comparatively high temperature

B. water is a good conductor of heat

C. evaporation of water produces lot of cooling

D. water has very high specific heat capacity

Answer: D



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7. Sea water is saltier than rain water because

A. sea animals are salt producing

B. sea beds have salt producing mines

C. the air around sea is saltish

D. rivers wash away salts from earth and
pour them into sea

Answer: D



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8. When water is heated from $0^{\circ}C$ to $10^{\circ}C$,
the volume of water

A. increases steadily

B. decreases steadily

C. first increases then decreases

D. first decreases then increases

Answer: C



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9. Burns caused by steam are much more severe than those caused by boiling water is

A. steam is a gas and engulfs the body quickly

B. steam has latent heat

C. temperature of steam is higher

D. steam pierces through the pores of body quickly

Answer: B



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10. Why is it easier to swim in a sea than a river ?

A. Sea water is still while river water is running

B. Saltnity of sea water is more than that of river water

C. Density of sea water is more than that of river

D. none of the above

Answer: C



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11. Water boils at a lower temperature than $100^{\circ}C$ on a hill station because

- A. there cloud formation at high altitudes
- B. pressure is lower at high altitudes
- C. temperature is lower at high altitudes
- D. water vapour are less at high altitudes

Answer: B



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12. The average salinity of sea water is

A. 0.02%

B. 2.5 %

C. 3 %

D. 3.5 %

Answer: D



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13. Soda water contains

- A. nitrous acid
- B. acetic acid
- C. carbon dioxide
- D. sulphuric acid

Answer: C



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14. Water is a compound because

A. it exists as a solid, a liquid or a gas

B. it contains hydrogen and oxygen

C. it contains two different elements

combined by chemical means in a fixed

ratio

D. none of the above

Answer: C



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15. Water is a good solvent of ionic salts because

A. it has no colour

B. it has a high boiling point

C. it has a high dipole moment

D. it has a high specific heat

Answer: C



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16. Heavy water is

A. sea water (H_2O + salt)

B. D_2O

C. H_2O_2

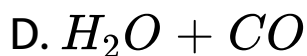
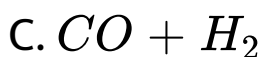
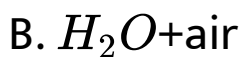
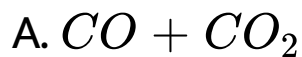
D. H_2O water + Ca and Mg carbonates

Answer: B



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17. Water gas is an important industrial fuel. It is a mixture of



Answer: C



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18. Consider the following statements Hard water does not give lather with soap because hard water contains

- (1) calcium bicarbonate
- (2) magnesium bicarbonate
- (3) chlorides of calcium
- (4) sulphates of calcium and magnesium

Which of these statements are correct ?

A. 1 and 2

B. 3 and 4

C. 1,2 and 3

D. all of these

Answer: D



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19. Water has abnormally high boiling point because

A. its molecule is bent

B. its molecule is linear

C. it is associated by hydrogen bonding

D. none of the above

Answer: C



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20. The H-O-H bond in water molecule is

A. $104^{\circ} 31'$

B. 120°

C. 180°

D. $109^{\circ} 28'$

Answer: A



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21. Heavy water has

A. insoluble impurities like silica

B. impurities like carbonates and bicarbonates of calcium and magnesium

C. high density and different physical properties than those of soft water

D. the capacity to expedite rate of nuclear reactions

Answer: D



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22. Water is said to be permanently hard when it contains :

A. chlorides of magnesium and calcium

B. carbonates of sodium and potassium

C. bicarbonates of magnesium and calcium

D. phosphates of sodium and potassium

Answer: A



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23. Point out the incorrect one

A. Hardness of water depends upon its soap consuming power

- B. Temporary hardness is due to bicarbonate of calcium and magnesium
- C. Permanent hardness is due to soluble sulphates, chlorides and nitrates of Ca and Mg
- D. Permanent hardness can be removed by boiling water

Answer: D



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24. Temporary hardness of water can be removed

A. by passing CO_2

B. by passing SO_2

C. by adding $Ca(OH)_2$

D. by adding $NaCl$

Answer: C



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25. Permanent hardness of water can be removed by adding calgon. This is an example of

A. adsorption

B. exchanger of ions

C. sequestration

D. precipitation

Answer: C



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26. If water is boiled for sometime, it becomes free from

A. permanent hardness

B. temporary hardness

C. suspended matter

D. temporary hardness and dissolved gases

Answer: D



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27. When zeolite which is hydrated sodium aluminium silicate, is treated with hard water the sodium ions are exchange with

A. H^+ ions

B. Ca^{2+} ions

C. SO_4^{2-}

D. Mg^{2+} ions

Answer: B



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28. Which of the following is used as a disinfectant in water treatment ?

A. Alum

B. Charcoal

C. Kieselgurh

D. Potassium permanganate

Answer: D



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29. The solubility of H_2O is

- A. Higher in H_2O than in D_2O
- B. higher in D_2O than in H_2O
- C. the same in both H_2O and D_2O
- D. none of the above

Answer: A



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30. Permanent hardness of water is due to the presence of

A. calcium bicarbonate

B. sulphates and chlorides of calcium and magnesium

C. sulphates and chlorides of sodium and potassium

D. nitrates of sodium and potassium

Answer: B



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31. Drinking water must be

A. hard

B. soft or hard

C. soft

D. none of the above

Answer: C



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32. Calgon is the commercial name of

A. sodium hexa metaphosphate $Na_6P_6O_{18}$

B. sodium aluminium silicate $Na_2AlSi_2O_3$

C. Washing soda

D. $C_{17}H_{35}COONa$

Answer: A



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33. The molecular formula of anhydrous compound A is CuSO_4 . In the crystalline state its molecular weight is 100. The number of water molecules of crystallisation in the crystalline state is

A. 1

B. 2

C. 3

D. 4

Answer: B



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34. $15 \text{ mL } O_2$ and $35 \text{ mL } H_2$ are taken in a tube and electric arc is produced a gas is left behind. It is

A. H_2

B. a mixture of H_2 and O_2

C. O_2

D. air

Answer: A



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35. Sodium zeolite

- A. removes only temporary hardness of water
- B. removes only permanent hardness
- C. removes both temporary and permanent hardness
- D. has no action on salts producing hardness

Answer: C



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36. Degree of hardness is expressed by

- A. the number of parts by weight of $CaCO_3$ present per one million parts by weight of water
- B. grams of $CaCO_3$ present in 1000 parts of water

C. grams of $MgCl_2$ in 1000 parts of water

D. grams of $MgCO_2$ in 1000 parts of water

Answer: A

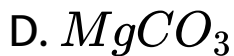
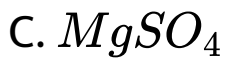


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37. Which of the following chemicals is not present in the clear hard water ?

A. $Mg(HCO_3)_2$

B. $CaCl_2$

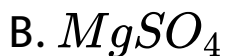
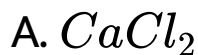


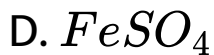
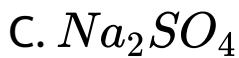
Answer: D



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38. Which of the following does not cause hardness of water ?





Answer: C



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39. The volume of O_2 which will combine with
100 L of H_2

A. 50 L

B. 200 L

C. 100 L

D. 10 L

Answer: A



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40. Ratio of H and O by weight in H_2O is

A. 2 : 1

B. 1 : 6

C. 1 : 8

D. 8: 1

Answer: C



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