



CHEMISTRY

BOOKS - MHTCET PREVIOUS YEAR PAPERS AND PRACTICE PAPERS

MHTCET 2007

Chemistry

1. Structure of ammonia is

A. pyramidal

B. tetrahedral

C. trigonal

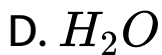
D. trigonal pyramidal

Answer: A



Watch Video Solution

2. Which of the following contains both covalent and ionic bond?



Answer: C



Watch Video Solution

3. The bond energy is the energy required to

A. dissociate one mole of the substance

B. dissociate bond in 1 kg of the substance

C. break one mole of similar bonds

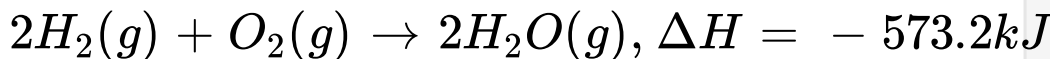
D. break bonds in one mole of substance

Answer: C



Watch Video Solution

4. For the reaction,



The heat of decomposition of water per mole

A. 286.6kJ

B. 573.2kJ

C. -28.66kJ

D. zero

Answer: A



Watch Video Solution

5. For an ideal gas, the heat of reaction at constant pressure and constant volume are related as

A. $H+E=pV$

B. $E = H + p\Delta V$

C. $q_p = q_v = \Delta nRT$

D. None of these

Answer: C



Watch Video Solution

6. Hess's law is based on

A. law of conservation of mass

B. law of conservation of energy

C. first law of thermodynamics

D. None of the above

Answer: B



Watch Video Solution

7. Which of the following is a path function

A. Internal energy

B. Enthalpy

C. Work

D. Entropy

Answer: C



Watch Video Solution

8. The amount of silver deposited on passing 2F of electricity through aqueous solution of $AgNO_3$ is :

A. 54g

B. 108g

C. 216g

D. 324g

Answer: C



Watch Video Solution

9. EMF of hydrogen electrode in term of pH is

(at 1 atm pressure).

A.
$$E_{H_2} = \frac{RT}{F} \times pH$$

$$\text{B. } E_{H_2} = \frac{RT}{F} \cdot \frac{1}{pH}$$

$$\text{C. } E_{H_2} = \frac{2.303RT}{F} pH$$

$$\text{D. } E_{H_2} = -0.591pH$$

Answer: D



Watch Video Solution

10. The standard E_{Red}° values of A,B,C are 0.68V, - 2.54V,- 0.50V respectively. The order of their reducing power is

A. $A > B > C$

B. $A > C > B$

C. $C > B > A$

D. $B > C > A$

Answer: D



Watch Video Solution

11. Peptization denotes:

A. digestion of food

B. hydrolysis of proteins

C. breaking and dispersion into colloidal state

D. precipitation of solid from colloidal dispersion

Answer: C



Watch Video Solution

12. Blue colour of water in sea is due to

A. refraction of blue light by impurities

B. refraction blue sky by water

C. scattering of light by water

D. None of the above

Answer: C



Watch Video Solution

13. Freundlich adsorption isotherm is

A. $\frac{x}{m} = kp^{1/m}$

B. $x = mkp^{1/n}$

C. $x / m = kp^{-n}$

D. None of these

Answer: D



Watch Video Solution

14. The pH of a 10^{-8} molar solution of HCl in water is

A. 8

B. between 6 and 7

C. between 7 and 8

D. None of these

Answer: C



Watch Video Solution

15. The solubility of AgCl is $1 \times 10^{-5} \text{ mol/L}$.

Its solubility in 0.1 molar sodium chloride solution is

A. 1×10^{-10}

B. 1×10^{-5}

C. 1×10^{-9}

D. 1×10^{-4}

Answer: C



Watch Video Solution

16. When ammonium chloride is added to ammonia solution, the pH of the resulting solution will be

A. increased

B. seven

C. decreased

D. unchanged

Answer: C



Watch Video Solution

17. Upon hydrolysis of sodium carbonate, the reaction takes place between:

A. sodium ion and water

B. Na^+ and OH^-

C. CO_3^{2-} and water

D. CO_3^{2-} and H^+

Answer: C



Watch Video Solution

18. A certain nuclide has a half life period of 30 min. If a sample containing 600 atoms is

allowed to decay for 90 min, how many atoms will remain?

A. 200 atoms

B. 450 atoms

C. 75 atoms

D. 150 atoms

Answer: C



Watch Video Solution

19. What is the fuel of atomic pile?

A. Thorium

B. Sodium

C. Uranium

D. Petroleum

Answer: C



Watch Video Solution

20. ${}_{90}\text{Th}^{232} \rightarrow {}_{82}\text{Pb}^{208}$. The number of α and β - particles emitted during the above reaction is

A. 8α and 4β

B. 8α and 16β

C. 4α and 2β

D. 6α and 4β

Answer: D



Watch Video Solution

21. The geometry of SiO_4^{4-} ion is

A. tetrahedral

B. trigonal

C. trihedral

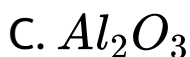
D. pentagonal

Answer: A



Watch Video Solution

22. Which of the following is an amphoteric oxide?

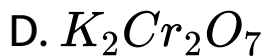
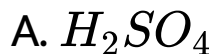


Answer: C



Watch Video Solution

23. Which one of the following reacts with glass ?



Answer: B



Watch Video Solution

24. Which halogen can be purified by sublimation ?

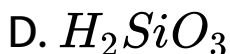


Answer: D



Watch Video Solution

25. Monosilane on coming in contact with air burns with a luminous flame producing vortex rings. These rings are of



Answer: A



Watch Video Solution

26. 2-dichloro propane on hydrolysis yields

A. acetone

B. 2, 2-propane diol

C. isopropyl alcohol

D. acetaldehyde

Answer: A



Watch Video Solution

27. Phenols are more acidic than alcohols because

A. phenoxide ion is stabilised by resonance

B. phenols are more soluble in polar solvents

C. phenoxides ions do not exhibit resonance

D. alcohols do not lose H atoms at all

Answer: A



Watch Video Solution

28. The comparatively high b.pt. of HF is due to

A. high reactivity of fluorine

B. small size of hydrogen atom

C. formation of hydrogen bonds and consequent association

D. high IE of fluorine

Answer: C



Watch Video Solution

29. Carborundum is

A. SiC

B. $Al_2O_3 \cdot H_2O$


C. $Al_2(SO_4)_3$

D. $AlCl_3$

Answer: A



Watch Video Solution

30.  is the anhydride of

A. 1, 2-butane diol

B. 2, 2-butane diol

C. 2,3-butane diol

D. 1, 1-butane diol

Answer: C



View Text Solution

31. 1 – Chlorobutane on reaction with alcoholic potash gives:

A. but-1-ene

B. butan-1-ol

C. but-2-ene

D. butan-2-ol

Answer: A



Watch Video Solution

32. Formalin is:

A. formic acid

B. fluoroform

C. 40% aqueous solution of methanal

D. para formaldehyde

Answer: C



Watch Video Solution

33. Nylon-66 is not a

A. condensation polymer

B. polyamide

C. both (a) and (b)

D. None of the above

Answer: D



Watch Video Solution

34. Lemon gives sour taste because of

A. citric acid

B. tartaric acid

C. oxalic acid

D. acetic acid

Answer: A



Watch Video Solution

35. For synthesis of 1-butene, CH_3MgI should be treated with

A. propene

B. 2-chloropropene

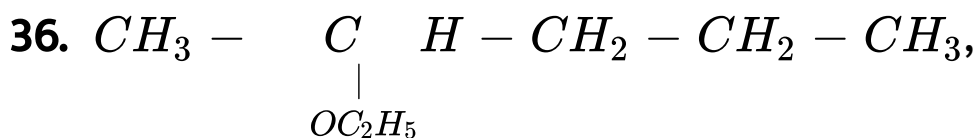
C. allyl chloride

D. ethyl chloride

Answer: C



Watch Video Solution



the IUPAC name is

A. 2-ethoxy pentane

B. 4-ethoxy pentane

C. pentyl-ethyl ether

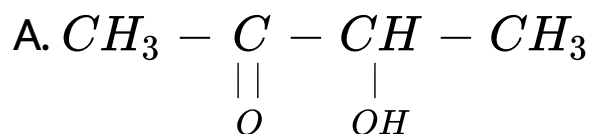
D. 2-pentoxy ethane

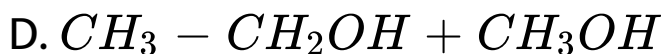
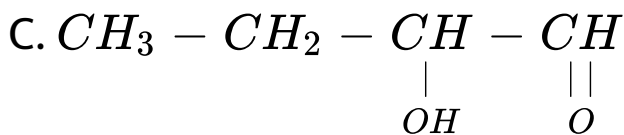
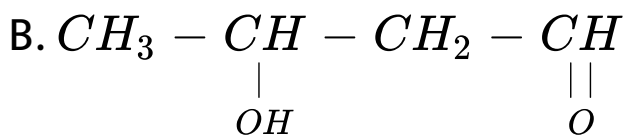
Answer: A



Watch Video Solution

37. The aldol condensation of $CH_3 - CHO$ results is the formation of





Answer: B



Watch Video Solution

38. Corrosive sublimate (HgCl_2) can be used to distinguish between

A. formic acid and acetic acid

B. acetaldehyde and butanone

C. formaldehyde and propanone

D. All of the above

Answer: A



View Text Solution

39. Williamson's synthesis involves

A. S_N1 mechanism

B. nucleophilic addition

C. SN_2 mechanism

D. SN_{AE} mechanism

Answer: C



Watch Video Solution

40. Terylene is the polyester of:

A. hexamethylene diamine and adipic acid

B. vinyl chloride and formaldehyde

C. melamine and formaldehyde

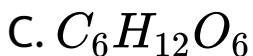
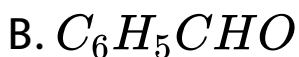
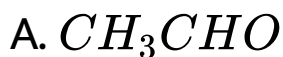
D. ethylene glycol and terephthalic acid

Answer: D



Watch Video Solution

41. Which does not react with Fehling's solution?



D. $HCOOH$

Answer: B



Watch Video Solution

42. Reaction of acids with alcohols is also known as

A. esterification

B. saponification

C. alkalisation

D. None of these

Answer: A



Watch Video Solution

43. Sucrose on hydrolysis gives

A. glucose and maltose

B. glucose and lactose

C. glucose and fructose

D. only glucose

Answer: C



View Text Solution

44. Glucose gives silver mirror test with ammoniacal silver nitrate because it has

A. aldehyde group

B. ester group

C. ketone group

D. alcoholic silver nitrate

Answer: A



Watch Video Solution

45. Zwitter ion is formed by

A. aniline

B. acetanilide

C. benzoic acid

D. glycine

Answer: D



Watch Video Solution

46. Oils and fats are esters of higher fatty acids with :

A. sugar

B. glycerol

C. tributyrine

D. polypeptide

Answer: B



 [Watch Video Solution](#)

47. Protein gives blue colour with

A. Benedict reagent

B. iodine solution

C. ninhydrin

D. biurete

Answer: C



[Watch Video Solution](#)

48. A mixture of ethyl amine and alcoholic KOH on heating gives

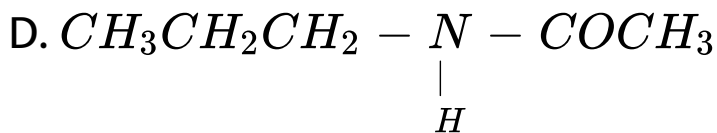
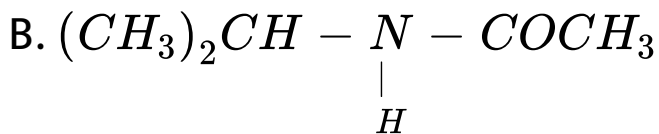
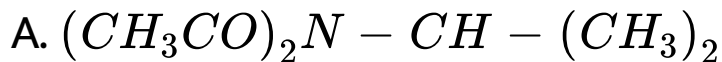
- A. alkyl cyanide
- B. biurete
- C. ethyl isocyanide
- D. ethyl isocyanate

Answer: C



Watch Video Solution

49. Isopropylamine with excess of acetyl chloride will give?



Answer: C



Watch Video Solution

50. Which of the following does not contain silicon?

A. Kaoline

B. Agate

C. Ruby

D. Quartz

Answer: C



Watch Video Solution