



CHEMISTRY

BOOKS - MHTCET PREVIOUS YEAR PAPERS AND PRACTICE PAPERS

MHTCET 2010

Chemistry

1. From which group the fats belong ?

A. Carboxylic acids

B. Carbonyl

C. Ester

D. Fatty acids

Answer: C



Watch Video Solution

2. How many isomeric vicinal- dihalides are possible for the compound having molecular formula $C_3H_6Cl_2$?

A. 1

B. 2

C. 3

D. 4

Answer: A



Watch Video Solution

3. Chlorine (Cl^{17}) free radical contains how many electrons around the nucleus ?

A. 16

B. 17

C. 18

D. 19

Answer: B



Watch Video Solution

4. 4 L-atom is equal to

A. 40.50 cal

B. 78.75 cal

C. 95.23 cal

D. 96 cal

Answer: D



Watch Video Solution

5. Potassium metabisulphite is a (an)

A. preservative

B. antioxidant

C. artificial sweetener

D. Both (a) and (b)

Answer: D



Watch Video Solution

6. The number of metamers possible for

$C_4H_{10}O$ is

A. 1

B. 2

C. 3

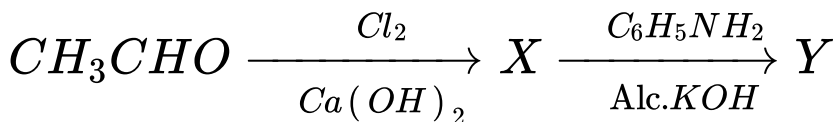
D. 4

Answer: C

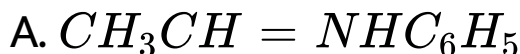


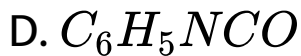
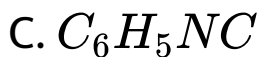
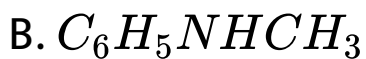
Watch Video Solution

7. In the following reaction sequence,



Y is





Answer: C



View Text Solution

8. How many gram equivalents of NaOH are required to neutralize $25cm^3$ of decinormal HCl solution ?

A. 0.00125

B. 0.0025

C. 0.0050

D. 0.025

Answer: B



Watch Video Solution

9. The heat of formation of water is 260kJ .

How much H_2O is decomposed by 130kJ heat

?

A. 0.25 mol

B. 1 mol

C. 0.5 mol

D. 2 mol

Answer: C



Watch Video Solution

10. The raw material for Raschig process is

A. chlorobenzene

B. phenol

C. benzene

D. anisole

Answer: C



Watch Video Solution

11.1 C electricity deposits

A. 10.8 g of Ag

B. 96500 g of Ag

C. electrochemical equivalent of Ag

D. half of electrochemical equivalent of Ag

Answer: C



Watch Video Solution

12. Given , for Sn^{+4} / Sn^{2+} , standard reduction potential is 0.15 V and for Au^{3+} / Au , standard reduction potential is 1.5 V.

For the reaction ,

$3Sn^{2+} + 2Au^{3+} \rightarrow 3Sn^{4+} + 2Au,$ the

value of E_{cell}° is ,

A. + 1.35

B. + 2.55

C. - 1.35

D. - 2.55

Answer: A



Watch Video Solution

13. The isotope that causes skin disease is

A. I^{131}

B. S^{35}

C. p^{31}

D. None of these

Answer: B



Watch Video Solution

14. The first order integrated rate equation is

A. $k = \frac{x}{t}$

B. $k = -\frac{2.303}{t} \log \frac{a}{a-x}$

C. $k = \frac{1}{t} \ln \frac{a}{a-x}$

D. $k = \frac{1}{t} \frac{x}{a(a-x)}$

Answer: C



Watch Video Solution

15. For the formation of terylene the number of moles of ethylene glycol required per mole of terephthalic acid is

A. 1

B. 2

C. 3

D. 4

Answer: A



Watch Video Solution

16. Ammonium acetate which is 0.01 M , is hydrolysed to 0.001 M concentration . Calculate the change in pH in 0.001 M solution , if initially $\text{pH} = \text{p}K_a$

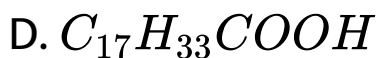
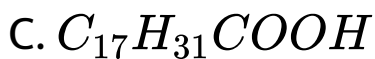
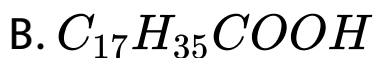
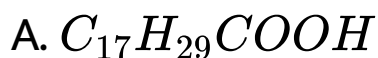
- A. 5
- B. 10
- C. 100
- D. 1

Answer: D



Watch Video Solution

17. Among the following , the formula of saturated fatty acid is



Answer: B



View Text Solution

18. For nuclear fusion reactions , the fusion temperature is of the order of

A. $10^5 K$

B. $10^3 K$

C. $10^7 K$

D. 100 K

Answer: C



View Text Solution

19. 1 mol alcohol reacts with Na to give what weight of hydrogen ?

A. 1 g

B. 2 g

C. 3 g

D. 3.5 g

Answer: A



Watch Video Solution

20. Find the correct equation

A. $E_2 - E_1 - H_2 + H_1 = n_2RT - n_1RT$

B. $E_2 - E_1 - H_2 - H_1 = n_2RT - n_1RT$

C. $H_2 - H_1 - E_2 + E_1 = n_2RT - n_1RT$

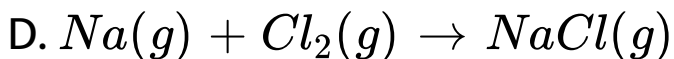
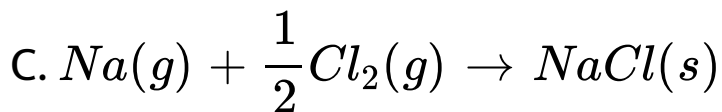
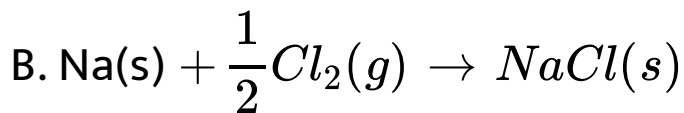
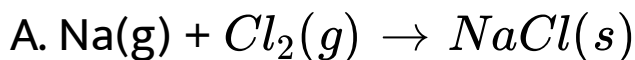
D. $H_2 - H_1 - E_2 + E_1 = n_2RT - n_1RT$

Answer: C



Watch Video Solution

21. Reaction for the formation of NaCl is



Answer: B



Watch Video Solution

22. For a first order reaction, units of rate constant are

A. $\text{mol L}^{-1} \text{s}^{-1}$

B. s^{-1}

C. $\text{L mol}^{-1} \text{s}^{-1}$

D. $\text{L}^2 \text{mol}^{-2} \text{s}^{-1}$

Answer: B



Watch Video Solution

23. Which of the following is a nucleophile ?



B. NH_3

C. $AlCl_3$

D. All of these

Answer: B



Watch Video Solution

24. 1 u (amu) is equal to

A. $1.492 \times 10^{-10} J$

B. $1.492 \times 10^{-7} J$

C. $1.492 \times 10^{-13} J$

D. $6.023 \times 10^{23} J$

Answer: A



Watch Video Solution

25. Which of the ions is colourless inspite of the presence of unpaired electrons ?



C. Gd^{3+}

D. Lu^{3+}

Answer: C



Watch Video Solution

26. Ethyl methyl ketone is obtained by heating calcium salts of

A. formic acid + propionic acid

B. acetic acid + propionic acid

C. acetic acid only

D. acetic acid + methanoic acid

Answer: B



View Text Solution

27. CH_3COOH when reacts with C_2H_5OH gives a product . The same product is obtained by which reaction ?

A. Acetic acid + methanol

B. Acetic anhydride + water

C. Acetic anhydride + ethanol

D. Acetamide + methanol

Answer: C



Watch Video Solution

28. Conjugate acid - base pair differ by

A. electron

B. proton

C. neutron

D. hydroxyl group

Answer: B



Watch Video Solution

29. Ce^{4+} is stable . This is because of

A. half-filled d-orbitals

B. all paired electrons in d-orbitals

C. empty orbital

D. fully filled d-orbital

Answer: C



View Text Solution

30. Which of the following amines gives yellow oily liquid with HNO_2 ?

A. Ethyl methyl amine

B. Aniline

C. 3-methyl benzyl amine

D. Methyl amine

Answer: A



View Text Solution

31. N-ethyl-N-methylpropan-1-amine is

A. 1° amine

B. 2° amine

C. 3° amine

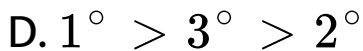
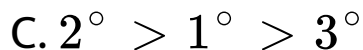
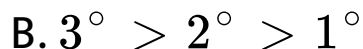
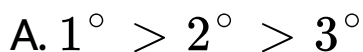
D. 4° amine

Answer: C



Watch Video Solution

32. The correct order of dehydration of alcohols is



Answer: B



Watch Video Solution

33. Ethanolic KOH gives

- A. dehalogenation reactions
- B. dehydrogenation reactions
- C. dehydrohalogenation reactions
- D. substitution reactions

Answer: C



[Watch Video Solution](#)

34. German silver does not contain

A. Sn

B. Cu

C. Zn

D. Ni

Answer: A



[View Text Solution](#)

35. Ratio of loss in solvent to gain in $CaCl_2$ tube is

A. $\frac{p^\circ}{p}$

B. $\frac{p}{p^\circ}$

C. $\frac{p^\circ - p}{p^\circ}$

D. $\frac{p - p^\circ}{p}$

Answer: C



View Text Solution

36. Which of the following is a trisaccharide ?

A. Stachyrose

B. Sucrose

C. Raffinose

D. Ribose

Answer: C



View Text Solution

37. Glucose on reaction with Fehling solution gives

- A. cupric oxide
- B. cuprous oxide
- C. saccharic acid
- D. both (b) and (c)

Answer: B



Watch Video Solution

38. 450 mg of glucose is dissolved in 100 g of solvent. What is the molality of the solution ?

A. 0.0025 m

B. 0.025 m

C. 0.25m

D. 2.5 m

Answer: B



Watch Video Solution

39. Dissolution of 1.5g of a non-volatile solute (mol. wt. = 60) in 250 g of a solvent reduces its freezing point by $0.01^{\circ}C$. Find the molal depression constant of the solvent.

A. 0.01

B. 0.001

C. 0.0001

D. 0.1

Answer: D



View Text Solution

40. 2.5cm^3 of $0.2\text{MH}_2\text{SO}_4$ solution is diluted to 0.5 dm^3 . Find normality of the diluted solution .

A. 0.2 N

B. 0.02 N

C. 0.002 N

D. 0.04 N

Answer: C





[Watch Video Solution](#)

41. Argon possesses

A. translational motion only

B. translational + rotational motion

C. translational + vibrational motion

D. translational + rotational + vibrational
motion

Answer: A



[View Text Solution](#)

42. α -hydroxy propanoic acid has ,
asymmetric carbon atoms .

A. 4

B. 3

C. 2

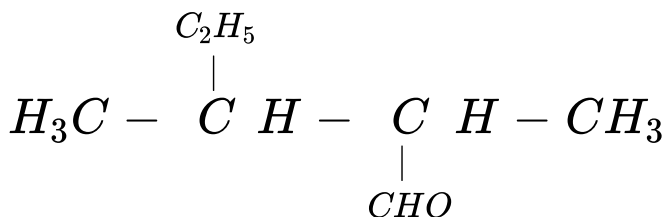
D. 1

Answer: D



Watch Video Solution

43. The IUPAC name of the following compound is



- A. 3-ethyl-2-methylbutanal
- B. 2,3-dimethylpentanal
- C. 2-ethyl-3-methylbutanal
- D. 2-ethyl-3-methylbutan-3-al

Answer: B



Watch Video Solution

44. In Clemmensen's reduction , the catalyst used is

A. Zn- Hg + Conc HCl

B. $NH_2NH_2 + C_2H_5ONa$

C. $PdCl_2 / H_2O$

D. $(C_6H_5)_3 + C_2H_5ONa$

Answer: A



Watch Video Solution

45. The common names of the lower fatty acids are obtained from

A. their parent hydrocarbon

B. their reduction product

C. the sources from which they are obtained

D. IUPAC system

Answer: C



46. The pressure of a gas is 100 k Pa. if it is compressed from 1 m^3 to 10 dm^3 , find the work done .

A. 990 J

B. 9990 J

C. 9900 J

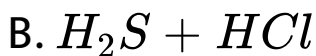
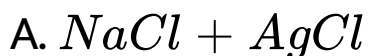
D. 99000 J

Answer: D



Watch Video Solution

47. Which is not an example of common ion effect ?



Answer: C



Watch Video Solution

48. Oxidation potential of unimoles of calomel is

A. $+0.25\text{ V}$

B. 0.00V

C. $+0.278\text{V}$

D. -0.28V

Answer: D



View Text Solution

49. Which gives +7 oxidation state ?

A. Mn(25)

B. Cr(24)

C. Cu(29)

D. Fe(26)

Answer: A



Watch Video Solution

50. NH_4Cl is acidic due to

A. cationic hydrolysis

B. anionic hydrolysis

C. its ionic nature

D. $pH > 7$

Answer: A



Watch Video Solution