

CHEMISTRY

NTA MOCK TESTS ENGLISH

NTA NEET SET 42

Chemistry

1. Which of the following cannot behave like a

Lewis acid?

A.
$$CO_3^{2\,-}$$

B.
$$Zn^{2+}$$

$$\mathsf{C}.\,SO_3$$

D.
$$SiCl_4$$

Answer: A



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2. Which of the following cannot give iodometric titrations?

A.
$$Ag^+$$

B.
$$Fe^{3+}$$

$$\mathsf{C.}\,Pb^{2\,+}$$

D.
$$Cu^{2+}$$

Answer: C



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3. Which of the following is known as gem - dibromide?

A. $CH_3CH(Br)CH(Br)CH_3$

 $\mathsf{B.}\,CH_2(Br)CH_2CH_2$

C. CH_2BrCH_2Br

D. $CH_3CBr_2CH_3$

Answer: D



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4. Potassium is involved in

A. Water

- B. Kerosene
- C. Alcohol
- D. Liquid ammonia

Answer: B



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5. Colloidal solution of which of the following cannot be prepared by Breding's arc method?

A. Pt

B. Au

C. Ag

D. Fe

Answer: D



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6. Which set of reagents are needed to synthesize the given unsymmetrical alkyne

$$CH_3 - C \equiv C - CH_2 - CH_3$$
?

A. Acetaldyde, 1 - bromopropane and conc.

 H_2SO_4

B. Ethyne , iodomethane , iodothane and sodamide

C. 1,2 - dichloroethane , 1 - propanol and alcoholic potassium hydroxide

D. Ethene, iodoethane, iodomethane and potassium hydroxide

Answer: B



7. Give evidence that $\left[Co(NH_3)_5Cl\right]SO_4$ and $\left[Co(NH_3)_5SO_4\right]CL$ are ionization isomers.

- A. Linkage
- B. Geometrical
- C. Ionization
- D. Optical

Answer: C



8. Which reagent used to test unsaturation of alkenes?

A. conc . H_2SO_4

B. Solution of Br_2 in CCl_4

C. Ammonical Cu_2Cl_2

D. Ammonical $AgNO_3$

Answer: B



9. The compound which does not give iodoform on treatment with NaOH and iodine is

A. Diethyl ketone

B. Acetone

C. Ethanol

D. Isopropyl alcohol

Answer: A



10. An isostere is

A.
$$ClO_4^{-}$$
 and OCN^-

B.
$$NO_2^{- \text{ and }} PO_4^{3-}$$

$$\mathsf{C.}\,CO_2, N_2O, NO_3^-$$

D.
$$NO_2^{- ext{ and }}O_3$$

Answer: D



11. The reaction of , water gas $(CO+H_2)+H_2$ at 673 K, 300 atmosphere in presence of the catalyst Cr_3O_3/ZnO is used for the manufacture of

A.
$$CH_3OH$$

B. HCOOH

C. HCHO

D. CH_3COOH

Answer: A



12. What is the general electronic configuration for second row transition series

A.
$$[Ne]3d^{1-10}, 4s^2$$

B.
$$[Ar]3d^{1-10}, 4s^{1-2}$$

C.
$$[Kr]4d^{1-10}, 5s^{1-2}$$

D.
$$[Xe]5d^{1-10}, 5s^{1-2}$$

Answer: C



13. RNH_2 reacts with $C_6H_5SO_2Cl$ in aqueous KOH to give a clear solution. On acidification a precepitate is obtained which is due to the formation of

B. $C_6H_5SO_2NH_2$

C. $R-N^-SO_2C_6H_5K^+$

D. $R-NHSO_2C_6H_5$

Answer: D

14. Which species in the given below has a coordinated bond?

A. CH_4

B. SO_3^{2-}

C. NH_3

D. CO_2

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15. What will be the major product when m-cresol is reacted with propargyl bromide $(HC \equiv C - CH_2Br)$ in Presence of K_2CO_3 in acetone?

A. Sodium metal

B. Conc . H_2SO_4

C. Sodium acetate

D. Anhydrous $ZnCl_2$

Answer: C



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16. The chemical formula of chile salt petre is

A. $NaNO_3$

B. $Na_2SO_{4.10}H_2O$

 $\mathsf{C}.\,KNO_3$

D. $Na_{2}S_{2}O_{3.5}H_{2}O$

Answer: A



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17. The freshly prepared solution if sugar undergo change in optical rotation , with time , is known as

A. Inversion

B. Specific rotation

C. Rotatory motion

D. Mutarotation

Answer: D



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18. Calculate molarity of the resultant solution obtained by mixing 1 M and 2 .5 liter NaOH solution and 0.5 M 3 liter NaOH solution .

A. 0.50 M

B. 0.73 M

C. 0.80 M

D. 1.0 M

Answer: B



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19. Electrolytic refining is used to purify which of the following metals?

- A. Cu and Zn
- B. Ge and Si
- C. Zr and Ti
- D. Zn and Hg

Answer: A



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20. In which of the following crystals, alternate tetrahedral voids are occupied?

- A. Na_2O
- B. ZnS
- C. NaCl
- D. CaF_2

Answer: B



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21. Which of the following drugs is an analgesic?

- A. Penicillin
- B. Paludrin
- C. Sulphaguanidine
- D. Analgin

Answer: D



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22. By adding which of the following process, permanent hardness of water can be removed.

- A. Sodiumbicarbonate
- B. Sodium chloride
- C. Washing soda
- D. Sodalime

Answer: C



- **23.** Which statement of the following is incorrect for gases ?
 - A. Volume of the gas is equal to the volume of the container confining the gas
 - B. Confined gas exerts uniform pressure on the walls of its container in all directions

- C. Gases do not have a definite shape and volume
- D. Mass of the gas cannot gas cannot be determined by weighing a container in which it is enclosed

Answer: D



24. Which of the following will exhibit geometrical isomerism?

- A. Propene
- B. Butene 2
- C. Butene 1
- D. 1, 1 dichloro butane

Answer: B



25. The following equilibrium exists in aqueous ${\sf solution}: CH_3COOH \to H^+ + CH_3COO^-$ If dilute HCl is added :

A. The equilibrium constant will increase

B. The equilibrium constant will decrease

C. Concentration of CH_3COO^- will decrease

D. Concentration of CH_3COO^- will

increase

Answer: C

26. For the reaction of one mole of zinc dust with one mole of sulphuric acid in a bomb calorimeter, ΔU and w corresponds to

A.
$$\Delta U < 0, w = 0$$

B.
$$\Delta U>0,\,w=0$$

C.
$$\Delta U=0, w<0$$

D.
$$\Delta U < 0, w > 0$$

27. The rate of a non - geseous reaction does not dependent on

A. Catalyst

B. Pressure

C. Concentration of CH_3COO^- will

decrease

D. Temperate

Answer: B



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28. In the cell, $Zn\big|\big|Zn^{2+}\big|\big|Cu^{2+}$ |Cu`, the negative terminals is

A.
$$Zn^{2+}$$

B.
$$Cu^{2+}$$

Answer: C



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29. In the following reaction correct change in phosphorus is explained by ,

$$4P+3KOH+3H_2O
ightarrow 3JH_2PO_2+PH_3$$

A. P is oxidized as well as reduced

B. P is oxidized only

C. P is reduced only

D. None of these

Answer: A



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30. What is the oxidising agent in chlorine water?

A. HCl

B. $HClO_2$

C. HOCI

D. None of these

Answer: C



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31. Activated charcoal is used to remove colouring matter from pure substances. It works by:

- A. Bleaching
- B. Reduction
- C. Oxidation
- D. Adsorption

Answer: D



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32. P_2O_5 is heated with water to give

- A. Hypophosphorus acid
- B. Hypophosphoric acid
- C. Orthophosphoric acid
- D. Orthophosphorus acid

Answer: C



33. One electron species having ionization enegry of 54.4eV is

A.
$$He^+$$

B. H

 $\mathsf{C.}\,Be^{2\,+}$

 $\mathrm{D.}\,Be^{3\,+}$

Answer: A



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34. The structure of compound, which is formed by $sP^3{
m d}$ hybridization will be

A. Angular

B. Planar

C. Pyramidal

D. Trigonal bipyramidal

Answer: D



35. Arrange following carbocation in the decreasing order of stability

(i)
$$CH_3-\overset{+}{C}H-CH_3$$

(ii)
$$CH_3-\overset{+}{C}H-O-CH_3$$

(iii)
$$CH_3-\overset{+}{CH}-CO-CH_3$$

A.
$$(iii) > (ii) > (i)$$

$$\mathsf{B.}\left(i\right)>\left(ii\right)>\left(iii\right)$$

$$\mathsf{C}.\left(i
ight)>\left(ii
ight)>\left(iii
ight)$$

$$\mathsf{D}.\left(i\right)<\left(ii\right)<\left(iii\right)$$

Answer: C



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36. Which is not an example of an ideal solution?

A.
$$C_6H_{14}+C_7H_{16}$$

$$\mathsf{B.}\,H_2O + C_4H_9OH$$

C.
$$C_2H_5Br+C_2H_5I$$

D.
$$\mathrm{CCl}_4 + SiCl_4$$

Answer: B



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37. Calculate the heat of formation of CO using given equations

$$C+O_2
ightarrow CO_2, \Delta H=X$$

$$CO+rac{1}{2}O_2
ightarrow CO_2, \Delta H=Y$$

A. X - Y

B.X + Y

C. Y - 2X

D. 2X - Y

Answer: A



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38. Calculate the standard potential of the cell ,If the standard electrode potentials of Zn^{2+}/Zn and Ag^+/Ag are -0.763 V and + 0.799 V respectively .

A. 0.036 V

B. 1.56 V

 $\mathsf{C.}-1.562V$

D. 0.799V

Answer: B



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39. The total number of structural ethers possible with the molecular formula $C_5H_{12}O$?

A. 4

- B. 5
- C. 6
- D. 7

Answer: C



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40. What is vinegar?

- A. HCOOH
- B. HCHO

 $C.CH_3CHO$

D. CH_3COOH

Answer: D



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41. Which of the following polymer is an example of fibre ?

A. Silk

B. Nylon - 6, 6

C. Dacron

D. All of these

Answer: D



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42. The gas A is bubbled through lime water, a while precipitate is formed. This precipitate dissolved on prolonged bubbling the same gas. On heating this solution, the white

gas B . The gases A and B respectively are

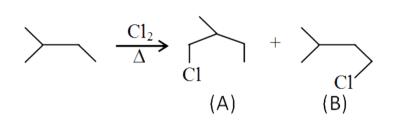
- A. CO and CO_2
- $B. CO_2 \text{ and } CO$
- C. CO and CO
- D. CO_2 and CO_2

Answer: D



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43. If the reactivity factor for chlorine substitution through free radical by abstracting a primary H - atom is 1 then the ratio of the amount of product A and B is -



A. 1:1

B. 1:2

C. 2:1

D. 3:1

Answer: C



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44. The missing structures A and B in the reaction sequence:

$$R-CH_2-CH_2OH \stackrel{Al_2O_3}{\underset{350^{\circ}C}{\longrightarrow}} r-CH=CH_2$$
 are given by the set :

$$\xrightarrow{(i)O_3} \xrightarrow{RCHO + A} \xrightarrow{Reduce} B$$

A. CH_3OH , RCOOH

- B. Methanal , RCH_2OH
- C. Ethanal, RCOOH
- D. Methanal, RCHOHR

Answer: B



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