



CHEMISTRY

BOOKS - NTA MOCK TESTS

NTA NEET SET 43

Chemistry

1. Which one of following elements is unable to form MF_6^{3-} ion?

A. B

B. Al

C. Ga

D. In

Answer: A

 [Watch Video Solution](#)

2. Considering Ellingham diagram, which of the following metals can be used to reduce alumina?

A. Mg

B. Zn

C. Fe

D. Cu

Answer: A

 [Watch Video Solution](#)

3. Mixture of chloroxylenol and terpineol acts as :

- A. Antiseptic
- B. Antipyretic
- C. Antibiotic
- D. Analgesic

Answer: A

 [Watch Video Solution](#)

4. The IUPAC name of



- A. Pent - 3 - en 1 - yne
- B. Pent - 2 - en 3 - yne

C. Pent - 3 - en 4 - yne

D. Pent - 2 - en 4 - yne

Answer:

 [Watch Video Solution](#)

5. In the structure of ClF_3 , the number of lone pairs of electrons on central atom 'Cl' is -

A. Four

B. Two

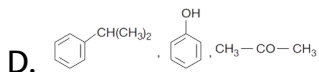
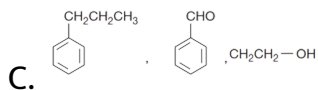
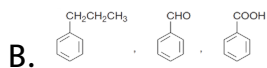
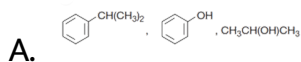
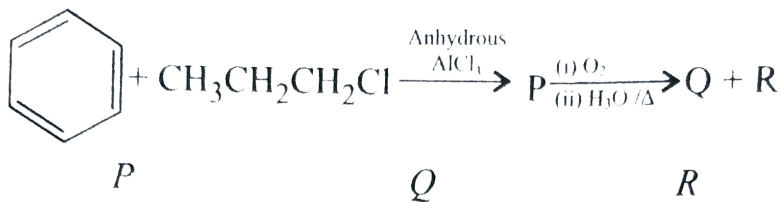
C. One

D. Three

Answer: B

 [Watch Video Solution](#)

6. Identify the major product P, Q and R in the following sequence of reactions:



Answer: D

Watch Video Solution

7. Which of the following compounds can form a Zwitter ion ?

A. Benzoic acid

B. Acetanilide

C. Aniline

D. Glycine

Answer: D

 [Watch Video Solution](#)

8. The type of isomerism shown by the complex $[CoCl_2(en)_2]$ is

A. Ionization isomerism

B. Coordination isomerism

C. Geometrical isomerism

D. Linkage isomerism

Answer: C

 [Watch Video Solution](#)

9. The difference between amylose and amylopectin is

- A. Amylopectin have $1 \rightarrow 4\alpha$ - linkage and $1 - 6\beta$ - linkage
- B. Amylose have $1 \rightarrow 4\alpha$ - linkage and $1 - 6\beta$ - linkage
- C. Amylopectin have $1 \rightarrow 4\alpha$ - linkage and $1 - 6\alpha$ - linkage
- D. Amylose have made up of glucose and galactose

Answer: C

 [Watch Video Solution](#)

10. Which oxide of nitrogen is not a common pollutant introduced into the atmosphere both due to natural and human activity?

- A. N_2O
- B. NO_2
- C. N_2O_5
- D. NO

Answer: C

 [Watch Video Solution](#)

11. The compound A on treatment with Na gives B , and with PCl_5 gives C . B and C react together to give di Ethyl ether. A , B and C are in the order

- A. C_2H_5Cl , C_2H_6 , C_2H_5OH

B. C_2H_5OH , C_2H_5Cl , C_2H_5ONa

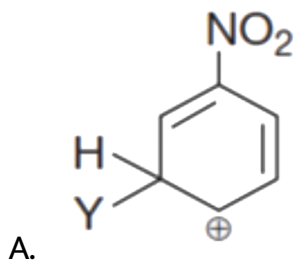
C. C_2H_5OH , C_2H_6 , C_2H_5Cl

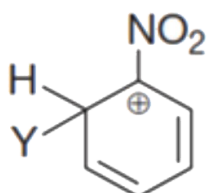
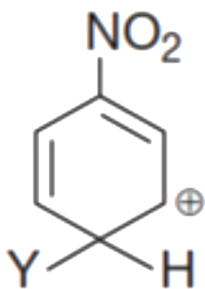
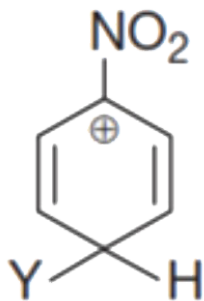
D. C_2H_5OH , C_2H_2ONa , C_2H_5Cl

Answer: D

 [Watch Video Solution](#)

12. Which of the following carbocations is expected to be most stable?





Answer: A

 [Watch Video Solution](#)

13. Carboxylic acid have higher boiling points than aldehydes, ketones and even alcohol of comparable molecular mass. It is due to their

- A. More extensive association of carboxylic acid via van der Waals force of attraction
- B. Formation of carboxylate ion
- C. Formation of intermolecular H - bonding
- D. Formation of intermolecular H - bonding

Answer: D

 [Watch Video Solution](#)

14. Iron carbonyl, $Fe(CO)_5$ is

A. Trinuclear

B. Mononuclear

C. Tetranuclear

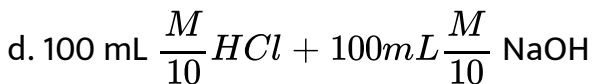
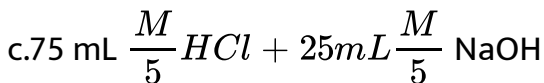
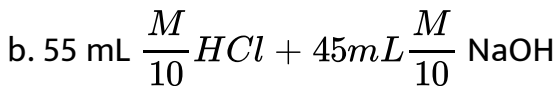
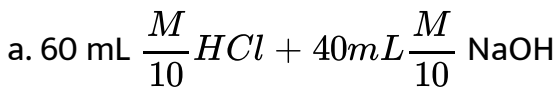
D. Dinuclear

Answer: B



Watch Video Solution

15. Following solutions were prepared by mixing different volumes of NaOH and HCl of different concentrations:



pH of which one of them will be equal to 1 ?

A. 4

B. 1

C. 2

D. 3

Answer: D



Watch Video Solution

16. On which of the following properties does the coagulating power of an ion depend?

A. Both magnitude and sign of the charge on the ion

B. Size of the ion alone

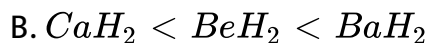
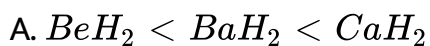
C. The magnitude of the ion alone

D. The sign of charge on the ion alone

Answer: A

 [Watch Video Solution](#)

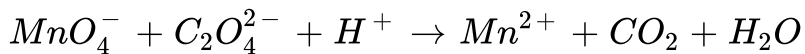
17. Among CaH_2 , BeH_2 , BaH_2 , the order of ionic character is



Answer: C

 [Watch Video Solution](#)

18. For the redox reaction



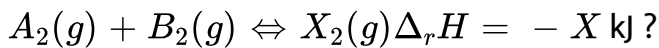
The correct coefficients of the reactants for the balanced reaction are

- A. MnO_4^- $\text{C}_2\text{O}_4^{2-}$ H^+
2 16 5
- B. MnO_4^- $\text{C}_2\text{O}_4^{2-}$ H^+
2 5 16
- C. MnO_4^- $\text{C}_2\text{O}_4^{2-}$ H^+
16 5 2
- D. MnO_4^- $\text{C}_2\text{O}_4^{2-}$ H^+
5 16 2

Answer: B

 [Watch Video Solution](#)

19. Which one of the following condition will favour maximum formation of the product in the reaction.



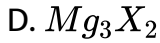
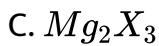
- A. High temperature and high pressure
- B. Low temperature and low pressure
- C. Low temperature and high pressure
- D. High temperature and low pressure

Answer: C

 [Watch Video Solution](#)

20. Magnesium reacts with an element (X) to form an ionic compound. If the ground state electronic configuration of (X) is $1s^2, 2s^2 2p^3$, the simplest formula for this compound is

- A. Mg_2X
- B. MgX_2



Answer: D

 [Watch Video Solution](#)

21. Iron exhibits b structure at room temperature. Above $9000^\circ C$, it transforms to f structure. The ratio of density of iron at room temperature to that at $900^\circ C$ (assuming molar mass and atomic radius of iron remains constant with temperature) is

A. $\frac{3\sqrt{3}}{4\sqrt{2}}$

B. $\frac{4\sqrt{3}}{3\sqrt{2}}$

C. $\frac{\sqrt{3}}{\sqrt{2}}$

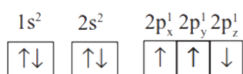
D. $\frac{1}{2}$

Answer: A

 Watch Video Solution

22. Which one is a wrong statement ?

A. The electronic configuration of N atom is



B. An orbital is designated by three quantum numbers while an electron in an atom is designated by four quantum numbers.

C. Total orbital angular momentum of electron in 's' orbital is equal to zero.

D. The value of m for d_z is zero.

Answer: A

 Watch Video Solution

23. Nylon is an example of

- A. Polysaccharide
- B. Polyamide
- C. Polythene
- D. Polyester

Answer: B

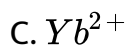


[Watch Video Solution](#)

24. Which of the following lanthanoid ions is diamagnetic ?

(At nos . `Ce = 58 , Sm = 62, Eu = 63 , Yb =70)

- A. Sm^{2+}



Answer: C



Watch Video Solution

25. 6.02×10^{20} molecules of urea are present in 100 ml of its solution. The concentration of solution is :

A. 0.01 M

B. 0.001 M

C. 0.1 M

D. 0.02 M

Answer: A



Watch Video Solution

26. An excess of $AgNO_3$ is added to 100mL of a 0.01M solution of dichlorotetraaquachromin (III) chloride. The number of moles of $AgCl$ precipitated would be:

A. 0.002

B. 0.003

C. 0.01

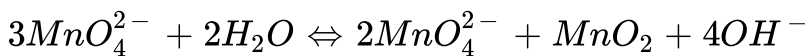
D. 0.001

Answer: D



Watch Video Solution

27. $KMnO_4$ can be prepared from K_2MnO_4 as per the reaction



The reaction can go to completion by removing OH^- ions by adding.

A. KOH

B. CO_2

C. SO_2

D. HCl

Answer: B



[Watch Video Solution](#)

28. Which of the following compounds will not undergo Friedel – Crafts reaction easily ?

A. Xylene

B. Nitrobenzene

C. Toluene

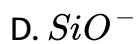
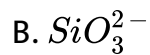
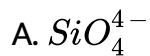
D. Cumene

Answer: B



Watch Video Solution

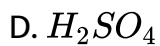
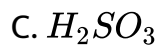
29. The basic structural unit of silicates is



Answer: A

 [Watch Video Solution](#)

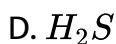
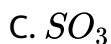
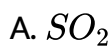
30. Which is the strongest acid in the following ?



Answer: B

 [Watch Video Solution](#)

31. Roasting of sulphides gives the gas X as a by product. This is a colourless gas with choking smell of burnt sulphur and causes great damage to respiratory organs as a result of acid rain. Its aqueous solution is acidic, acts as reducing agent and its acid has never been isolated. The gas X is :-



Answer: A



Watch Video Solution

32. At $25^{\circ}C$ molar conductance of 0.1 molar aqueous solution of ammonium hydroxide is $9.54\text{ohm}^{-1}\text{cm}^2\text{mol}^{-1}$ and at infinite dilution its molar conductance is $238\text{ohm}^{-1}\text{cm}^2\text{mol}^{-1}$. The degree of ionisation of ammonium hydroxide at the same concentration and temperature is

A. 20.800 %

B. 1.008 %

C. 40.800 %

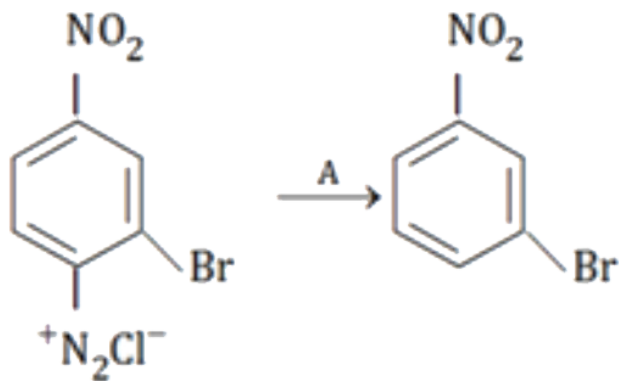
D. 2.080 %

Answer: B

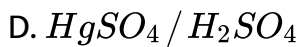
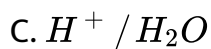
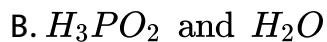
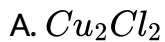


Watch Video Solution

33. In the reaction



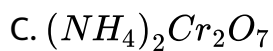
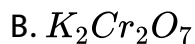
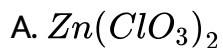
A is



Answer: B

 Watch Video Solution

34. Which of the following does not give oxygen on heating ?



Answer: C



Watch Video Solution

35. XeF_2 is isostructural with



D. TeF_4

Answer: A

 [Watch Video Solution](#)

36. A reaction having equal energies of activation for forward and reverse reactions has

A. $\Delta S = 0$

B. $\Delta G = 0$

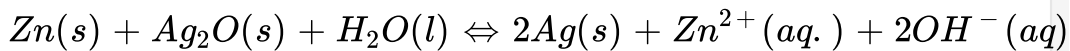
C. $\Delta H = 0$

D. All of these

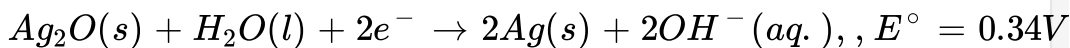
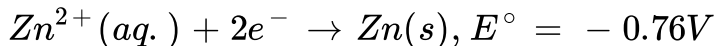
Answer: C

 [Watch Video Solution](#)

37. A button cell used in watches functions as follows



If half cell potentials are



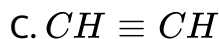
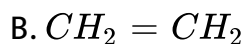
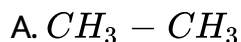
The cell potential will be

- A. 1.1 V
- B. 0.42V
- C. 0.84 V
- D. 1.34 V

Answer: A

 [Watch Video Solution](#)

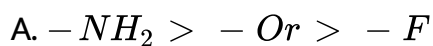
38. Hydrocarbon(*A*) reacts with bromine by substitution to form an alkyl bromide which by Wurtz reaction is converted to gaseous hydrocarbon containing less than four carbon atoms (*A*) is

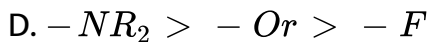
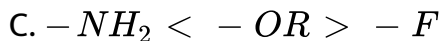
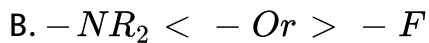


Answer: D

 Watch Video Solution

39. Which of the following is correct with respect to $-I$ effect of the substitutes? ($R = alkyl$)



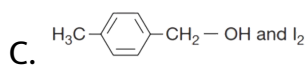
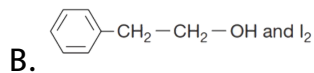
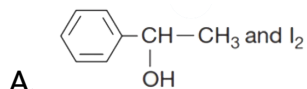


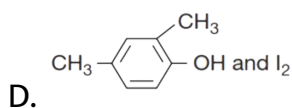
Answer: C

 **Watch Video Solution**

40. Compound A , $C_8H_{10}O$, is found to react with $NaOI$ (produced by reacting Y with $NaOH$) and yields a yellow precipitate with characteristic smell.

A and Y are respectively





Answer: A

 [Watch Video Solution](#)

41. Given van der Waals constant for NH_3 , H_2 , O_2 and CO_2 are respectively 4.17, 0.244, 1.36 and 3.59, which one of the following gases is most easily liquefied?

A. O_2

B. H_2

C. NH_3

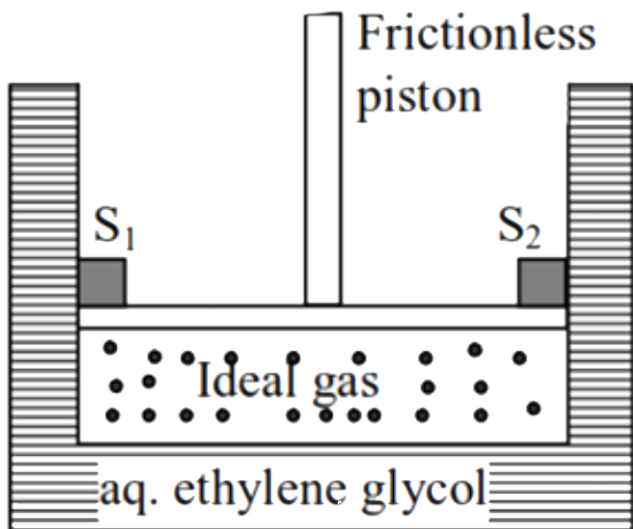
D. CO_2

Answer: C

 [Watch Video Solution](#)

42. A cylinder containing an ideal gas ($0.1\text{ mol of }1.0\text{ dm}^3$) is in thermal equilibrium with a large volume of 0.5 molal aqueous solution of ethylene glycol at its freezing point. If the stoppers S_1 and S_2 (as shown in the figure) are suddenly withdrawn, the volume of the gas in litres after equilibrium is achieved will be

(Given, K_f (water) = 2.0 K kg mol^{-1} , $R = 0.08\text{ dm}^3\text{ atm K}^{-1}\text{ mol}^{-1}$)



A. 1.14

B. 0.57

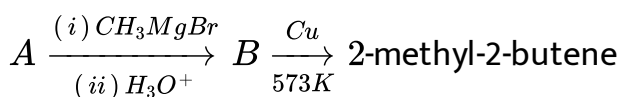
C. 2.18

D. 4.36

Answer: C

 [Watch Video Solution](#)

43. Consider the following reactions



the mass percentage of carbon in A is _____.

A. 33.33

B. 6.67

C. 16.66

D. 66.67

Answer: D



[Watch Video Solution](#)

44. The most suitable method of separation of a mixture of ortho and para nitrophenol in the ratio 1 : 1 is :

A. Chromatography

B. Crystallisation

C. Steam distillation

D. Sublimation .

Answer: C



[Watch Video Solution](#)

45. Which of the following statements is not incorrect ?

- A. Ovalbumin is a simple food reserve in egg - white
- B. Blood proteins thrombin and fibrinogen are involved in blood clotting
- C. Denaturation makes the proteins more active
- D. Insulin maintains sugar level in the blood of a human body

Answer: C



Watch Video Solution