CHEMISTRY

NTA MOCK TESTS ENGLISH

NTA JEE MOCK TEST 89

Chemistry

1. The Cl-C-Cl angle is 1,1,2,2-tetrachloroethene and tetrachloromethane respectively will be about

A. 109.5° and 90°

B. 120° and 109.5°

C. 90° and 109.5°

D. 109.5° and 120°

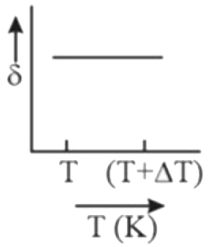
Answer: B

Watch Video Solution

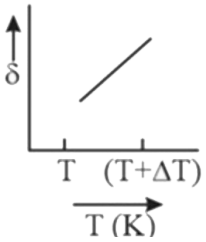
2. An ideal gas is initially at temperature T and volume V. ITS volume is increased by ΔV due to an increase in temperature ΔT, pressure

remaining constant. The quantity $\delta = \Delta V / V \Delta T$ varies with temperature as

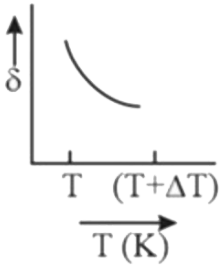
A.

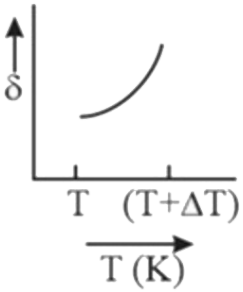


B.



C.





D.

Answer: C

Watch Video Solution

3. When photon of energy 4.25 eV strike the surface of metal A, the ejected photoelectrons have maximum kinetic energy T_A and de Broglie wavlength λ_A. The maximum kinetic

energy of photoelectrons liberated from another metal B by photons of energy 4.70 eV is $T_B = (T_A - 1.50)$eV. If the de Broglie wavelength of these photoelectrons is $\lambda_B = 2\lambda_A$, then

A. The work function of A is 2.25 eV

B. The work function of B is 3.70 eV

C. $T_A = 2.00eV$

D. $T_B = 2.75eV$

Answer: D

Watch Video Solution

4. A red coloured mixed oxide (X) on treatment with conc. HNO_3 gives a compound (Y). (Y) with HCl produces a chloride (Z) which is insoluble in cold water but soluble in hot water, (Z) can also be formed by treating (X) with conc. HCl. Compounds (X), (Y) and (Z) are :

A. $Pb_3O_4, PbNO_3, PbCl_2$

B. $Mn_3O_4, MnO_2, MnCl_2$

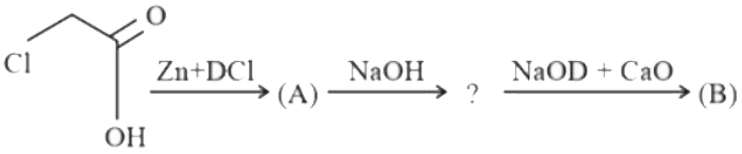
C. $Fe_3O_4, Fe_2O_3, FeCl_3$

D. $Fe_2O_4, FeO, FeCl_2$

Answer: A

Watch Video Solution

5.



The Compound (A) and (B) in the equation given above are

A. CH_3COOH, CH_3CH_3

B. $DCH_2 - COOD, CH_4$

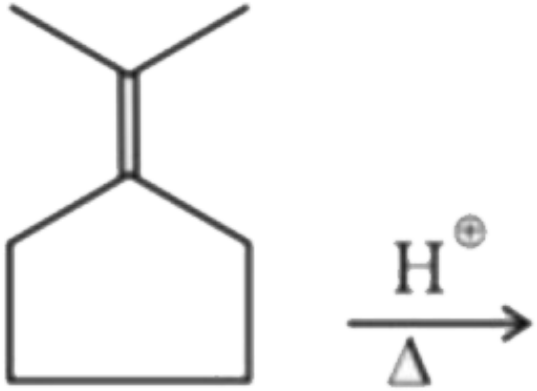
C. $DCH_2 - COOH, CH_2D_2$

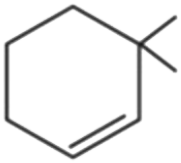
D. $CH_3 - COOH, CH_3D$

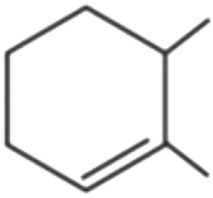
Answer: C

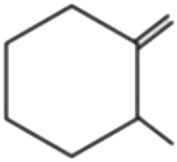
Watch Video Solution

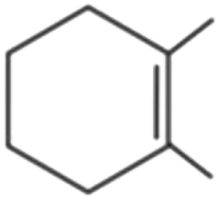
6. Product of the following reaction is



A. 

B. 

C. 

D. 

Answer: D

Watch Video Solution

7. An inorganic compound (X) made up of two most occurring elements in the earth`s crust and used in

building construction.

When (X) reacts with carbon . It forms a poisonous gas (Y) which is most stable diatomic molecule . Identify compounds (X) and (Y) .

A. SiO_2, CO_2

B. SiO_2, CO

C. SiO_2, N_2

D. CaO, CO_2

Answer: B

Watch Video Solution

8. If P° and P_s are vapour pressure of solvent and its solution, respectively, χ_1 and χ_2 are mole fractions of solvent and solute, respectively, then

A. $P_S = P^0 n_1$

B. $P_S = P^0 n_2$

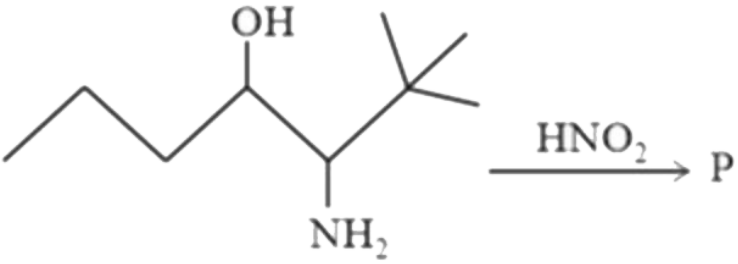
C. $P^0 = P_S n_2$

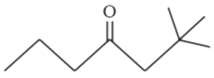
D. $P_S = P^0 \left(\frac{n_1}{n_2} \right)$

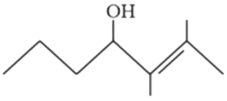
Answer: A

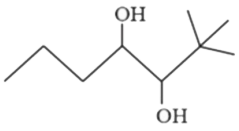
Watch Video Solution

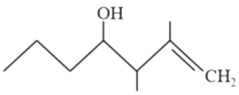
9. Predict the major product P in the following reaction.



A. 

B. 

C. 

D. 

Answer: A

Watch Video Solution

10. Componds (A) and B are treated with dilute HCl separately. The gases liberated are Y and Z respectively. Y turns acidified $K_2Cr_2O_7$ paper green while Z turns lead

acetate paper black. The compounds A and B are respectively :

A. $NaCl$ and Na_2CO_3

B. Na_2S and Na_2S

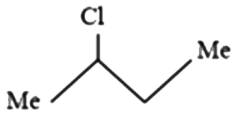
C. Na_2S and Na_2SO_3

D. Na_2SPO_3 and Na_2SO_4

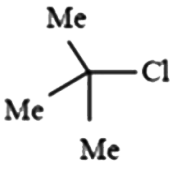
Answer: B

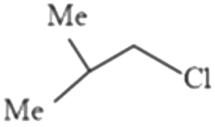
Watch Video Solution

11. Equal amount of an $RCl(C_4H_9Cl)$ is reacted at the same temperature with equal volume of $0.2M$ and $0.4M$ solution of KOH, respectively, in two separate experiments. The time taken for the reaction of $50\,\%$ of (C_4H_9Cl) was found to be same, the alkyl halide is :

A. 

B. 

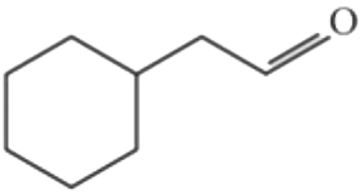
C. 

D. 

Answer: B

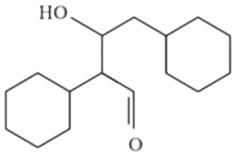
Watch Video Solution

12. What is the product of the following reaction?

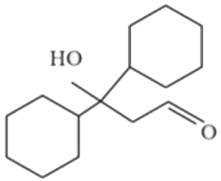


$\xrightarrow{10\%NaOH,\ H_2O}$?

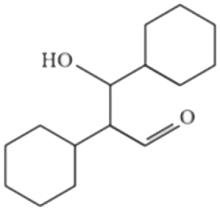
A.



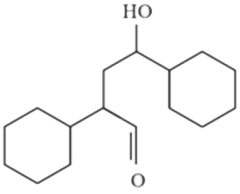
B.



C.



D.



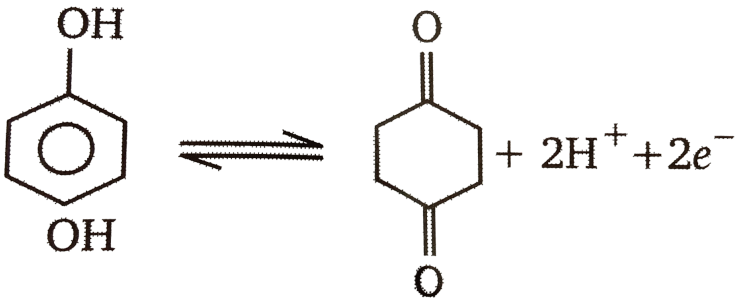
Answer: A

Watch Video Solution

13. At

$pH = 2, E^{\circ}_{(\text{Quinhydrone})} = 1.30V, E_{\text{Quinhydrone}}$

will be :



A. 1.36 V

B. 1.32 V

C. 1.42 V

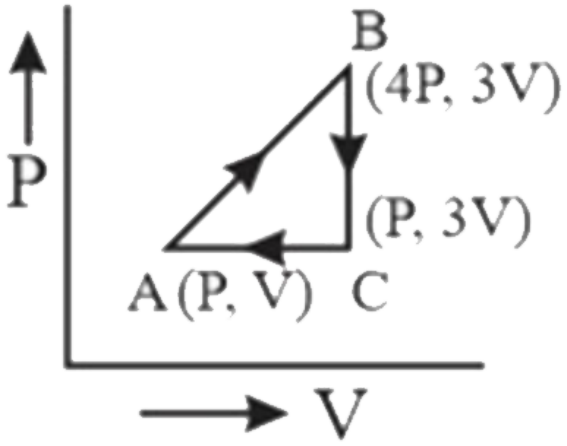
D. 1.26 V

Answer: C

 Watch Video Solution

14. The net work done through a series of changes reported is figure at the end of cycle

for an ideal gas is equal to



A. zero

B. $-5PV$

C. $+3PV$

D. $-3PV$

Answer: C

Watch Video Solution

15. A solid AB has $NaCl$ type structure with edge length 580.4 pm. Then radius of A^+ is 100 p m. What is the radius of B^- in pm?

A. 190.2

B. 540.13

C. 525

D. 78.12

Answer: A

Watch Video Solution

16. The number of geometrical isomers of $\left[Co(NH_3)_3(NO_2)_3\right]$ are

A. 4

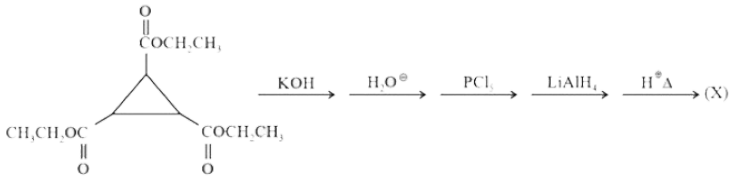
B. 3

C. 2

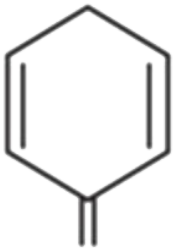
D. 0

Answer: C

Watch Video Solution

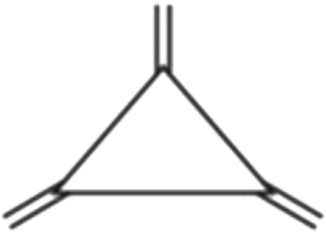


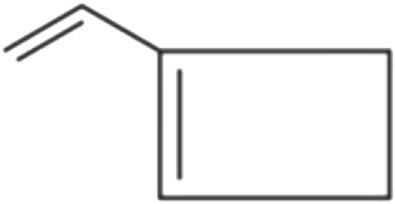
17. Product (X) is



A.

B.

C. 

D. 

Answer: B

Watch Video Solution

18. Euchlorine is

A. obtained by heating perchlorate with conc. HCl

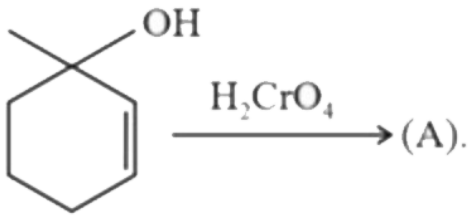
B. a chloride europium

C. a mixture of Cl_2 and Cl_2O_7

D. a micture of Cl_2 and ClO_2

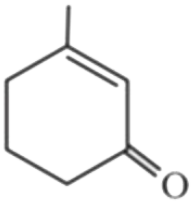
Answer: D

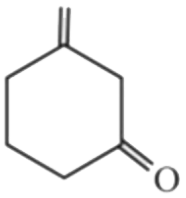
Watch Video Solution

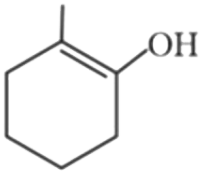
19. 

Product (A) is

A. No reaction

B. 

C. 

D. 

Answer: B

Watch Video Solution

20. What are the products formed in the reaction of xenon hexafluoride with silicon dioxide ?

A. $XeSiO_4 + HF$

B. $XeF_2 + SiF_4$

C. $XeO_3 + SiF_4$

D. $XeOF_4 + SiF_4$

Answer: D

Watch Video Solution

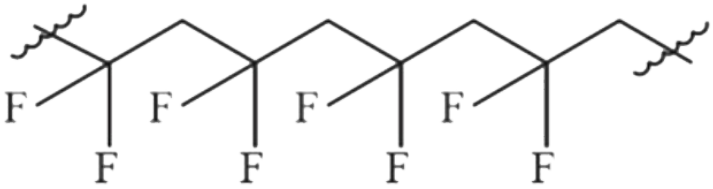
21. At $380^\circ C$, the half-life periof for the first order decompoistion of H_2O_2 is $360\ \min$. The energy of activation of the reaction is $200kJmol^{-1}$. Calculate the time required for $75\ \%$ decompoistion at $450^\circ C$.

Watch Video Solution

22. An aqueous solution of a metal bromode $MBr_2(0.05M)$ is saturated with H_2S. What is the minimum pH at which MS will precipitate? K_{sp} for $MS = 6.0 \times 10^{-21}$. Concentration of satured $H_2S = 0.1M, K_1 = 10^{-7}$ and $K_2 = 1.3 \times 10^{-13}$ for H_2S.

Watch Video Solution

23. The following chain - growth polymer is made up of how many difluoroethylene monomer units?



Watch Video Solution

24. How many O - atoms are present in Equanil.

Watch Video Solution

25. Find out the $\%$ of oxalate ion in given sample of oxalate salt of which 0.3 g is present in 100 mL of solution required 90 mL. $N/20 KMnO_4$ for complete oxidation.

Watch Video Solution