



CHEMISTRY

BOOKS - NTA MOCK TESTS

NTA JEE MOCK TEST 22

Chemistry

1. Incorrect order of properties given in parenthesis are

A. $Cl > S > F > O$ (Electron affinity)

B. $O > F > B > C(IE_2)$

C. $N > O > P > S(IE_1)$

D. $O > C > B > N$ (Electron affinity)

Answer: A



Watch Video Solution

2. Incorrect statement about Mn_2O_7 is :

A. It is a covalent oxide

B. $Mn - O - Mn$ linkage is present

C. It is purple in colour

D. Mn is tetrahedrally surrounded by O atoms

Answer: C



Watch Video Solution

3. Which of the following species is not expected to be a ligand?

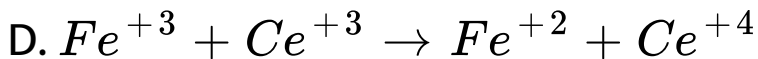
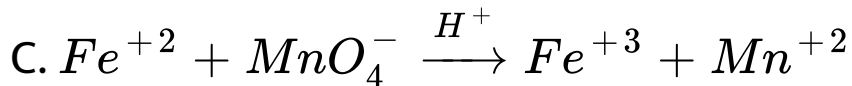
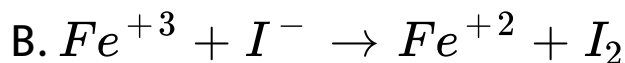
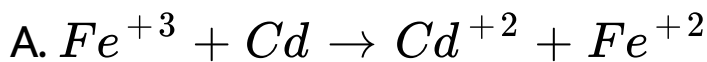


Answer: C



Watch Video Solution

4. Which of the following reaction does not occur spontaneously?



Answer: D



Watch Video Solution

5. Total number of ionisation isomers of $[Co(en)_2(Br)(Cl)]NO_3$ are (including the given compound)

A. 3

B. 4

C. 5

D. 9

Answer: A



Watch Video Solution

6. If the pK_a of a weak acid HA is 4.80 and the pK_b of a weak base BOH is 4.78. Then, the

pH of an aqueous solution of the corresponding salt, BA will be

A. 8.23

B. 9.41

C. 7.01

D. 5.91

Answer: C



Watch Video Solution

7.500 g impure sample of $CaCO_3$ on heating gives 70 g of CaO . Percentage impurities in sample is

A. 25 %

B. 50 %

C. 75 %

D. 80 %

Answer: C



Watch Video Solution

8. Number of photons having wavelength 632.8 nm, emitted by 5 mW laser source in 1 second is

A. 1.6×10^{19}

B. 1.6×10^{16}

C. 1.6×10^{25}

D. 1.6×10^{13}

Answer: B



Watch Video Solution

9. Which of the following increases in magnitude as the atomic number of alkali metals increases?

A. Electronegativity

B. First ionization energy

C. ionic radius

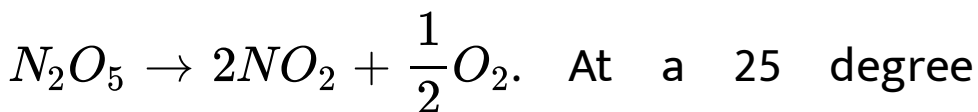
D. Melting point

Answer: C



Watch Video Solution

10. The following reaction decomposes



At a 25 degree

centigrade the rate constant of the reaction is

$5 \times 10^{-3} \text{ sec}^{-1}$. The initial pressure of N_2O_5

is 0.2 atm. If total pressure of gaseous mixture

becomes 0.35 atm, then calculate the time of decomposition of N_2O_5 .

A. 238.6 seconds

B. 138.6 seconds

C. 69.6 seconds

D. 89.3 seconds

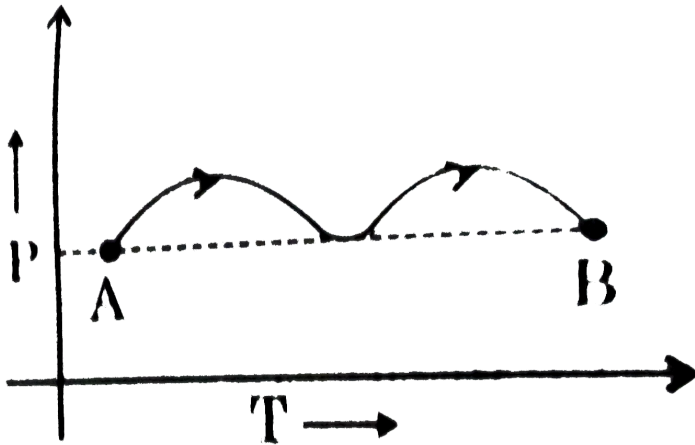
Answer: B



Watch Video Solution

11. The P-T graph, as given below, was observed for a process on an ideal gas. Which of the

statement is true ?



A. $w = +ve, \Delta H = +ve$

B. $w = -ve, \Delta H = -ve$

C. $w = -ve, \Delta H = +ve$

D. $w = +ve, \Delta H = -ve$

Answer: C



Watch Video Solution

12. A metal crystallizes into two cubic systems - face centred cubic (fcc) and simple cubic (SC), whose unit cell lengths are 4.5\AA and 1.501\AA respectively. Calculate the ratio of densities of face centred cubic and Simple cubic.

A. 0.15

B. 1.44

C. 2.25

D. 3.25

Answer: A



Watch Video Solution

13. The resistance of a conductivity cell containing $0.001M KCl$ solution at $298K$ is 1500Ω . What is the cell constant if conductivity of $0.001M KCl$ solution at $298K$ is $0.146 \times 10^{-3} Scm^{-1}$.

A. $0.200 cm^{-1}$

B. 0.219 cm^{-1}

C. 0.195 cm^{-1}

D. 0.190 cm^{-1}

Answer: B



Watch Video Solution

14. The compound which acts as antioxidant in packed food is

A. Benzoic acid

B. Butylated hydroxy Toluene (BHT)

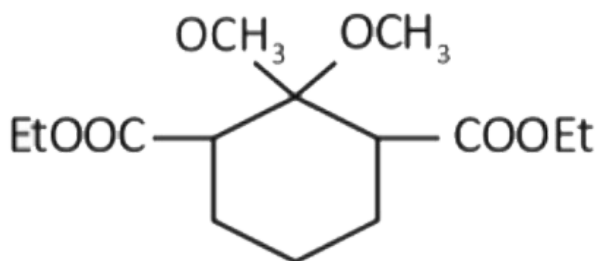
C. Para chlorometaxlenol

D. Sodium bicarbonate

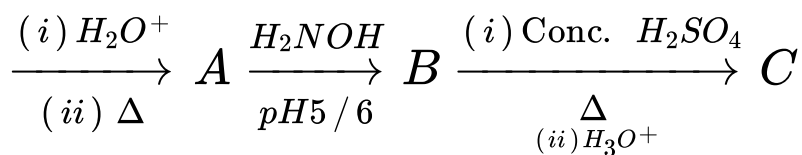
Answer: B



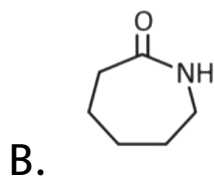
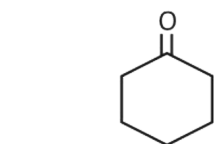
Watch Video Solution



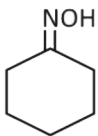
15.



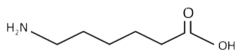
Compound C in above reaction sequence is



C.



D.

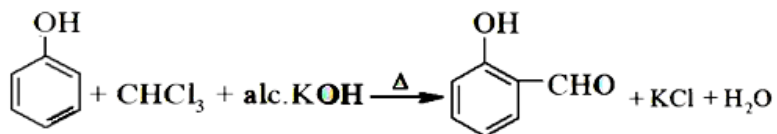


Answer: D



Watch Video Solution

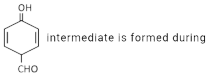
16. For the reaction



The correct statement regarding above reaction is

A. The reaction completes in more than one step

B. Dichloro carbene is an electrophile which attack on benzene ring

C.  intermediate is formed during
intermediate is formed during reaction

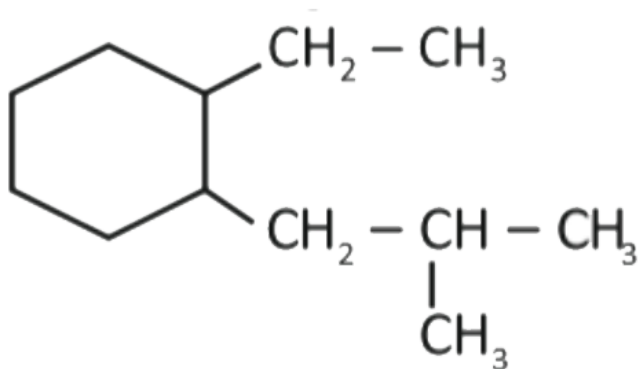
D. A & B both are correct

Answer: D



Watch Video Solution

17. The number of primary, secondary and tertiary carbons in the following, structure are respectively



A. 6, 3, 3

B. 3, 6, 3

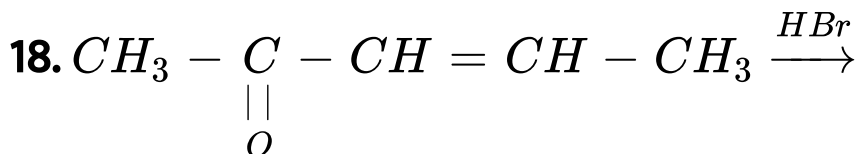
C. 3, 6, 2

D. 3, 2, 1

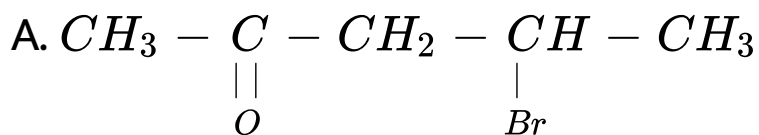
Answer: B

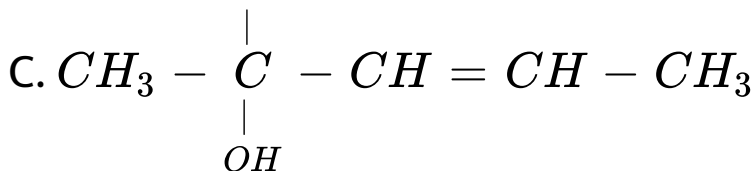
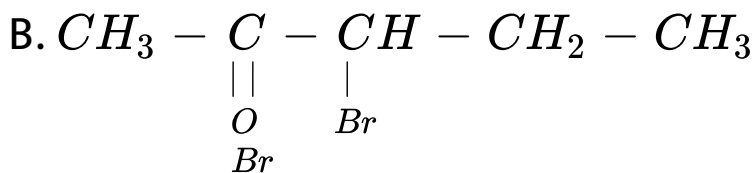


Watch Video Solution



find the major product





D. none of these

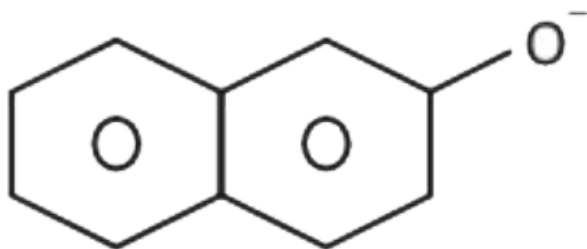
Answer: A



Watch Video Solution

19. How many resonating structures are possible for the following structure (including

the given structure)?



A. 8

B. 9

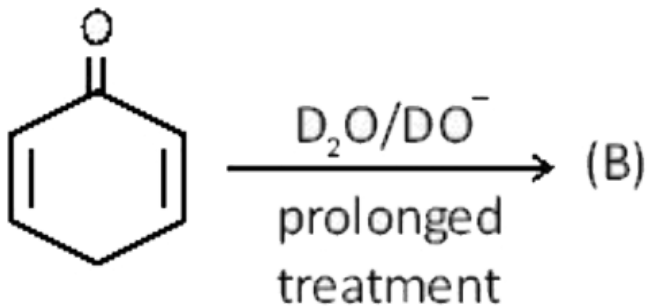
C. 10

D. 11

Answer: B



Watch Video Solution



20.

After prolonged treatment of (A) by D_2O / DO^- , the maximum possible difference in molecular weight of compound (A) and (B) is

A. 2

B. 3

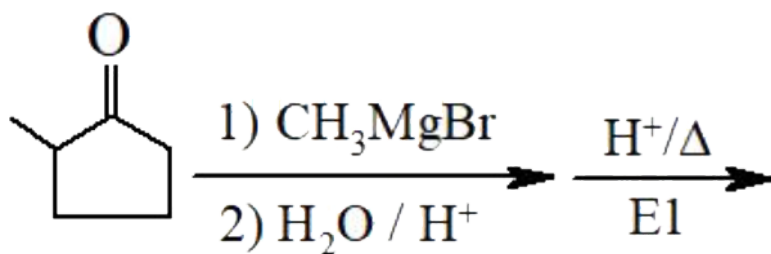
C. 4

D. 8

Answer: C



Watch Video Solution



Products

In the above reaction, number of possible alkenes (products) are



[Watch Video Solution](#)

22. The number of paramagnetic species among the following is

O_2 , CO , N_2 , C_2 , CsO_2 , BaO_2 , CO_2



[Watch Video Solution](#)

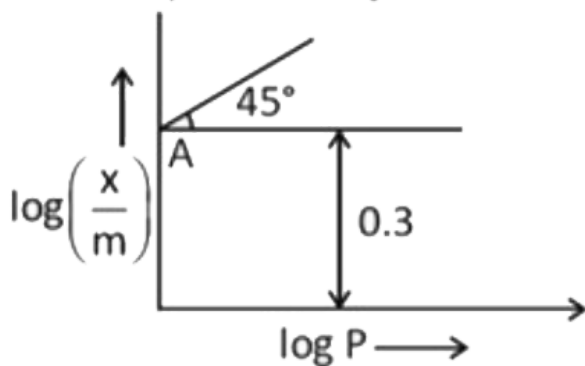
23. The relative humidity of air is 80% at $27^{\circ}C$. If the aqueous tension at the same temperature is 27 mm of Hg. The partial pressure of water vapour in the air will be (in mm of Hg).



Watch Video Solution

24. Graph between $\log\left(\frac{x}{m}\right)$ vs $\log P$ is provided for adsorption of NH_3 gas on metal surface. Calculate weight of NH_3 gas (in gm)

absorbed by 24 g of metal surface at 2 atm pressure. (Take $\log 2 = 0.3$)



[Watch Video Solution](#)

25. Melamine is used in formation of melamine formaldehyde resin. How many nitrogen atoms are present in melamine unit.



Watch Video Solution