The First Page will be left for providing Informations to students about the exam paper such as :

1. Do not switch the tabs while attempting the exam.
2. Check that your system is working properly and the internet connection is stable.
3. The question paper contains X no of questions,
4. Read all the instructions carefully, the exam will of of N no of Hours.

Provide all this kind of info on this page and start your actual questions strictly from second page.Thanks

Press Enter to enter a new Page..,

The Vander Waal's equation of corresponding states for 1 mole of gas is: [Where P_c = critical pressure, T_c = critical temperature, V_c = critical volume]

$$\left[\pi = \frac{P}{P_c}, \phi = \frac{V}{V_c} \text{ and } \theta = \frac{T}{T_c}\right]$$

(A) $\left[\pi - \frac{3}{\phi}\right](3\phi - 1) = 8R\theta$

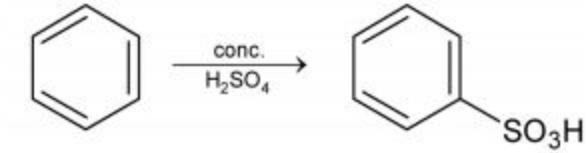
(B) $\left[\pi + \frac{3}{\phi}\right](3\phi - 1) = 8R\theta$

(C) $\left[\pi + \frac{3}{\phi}\right](3\phi + 1) = 8R\theta$

(D) $\left[\pi - \frac{\phi}{3}\right](3\phi - 1) = 8R\theta$

Given that $E^0_{Fe^{+2}|Fe} = -0.44V$; $E^0_{Fe^{+3}|Fe^{+2}} = 0.77$. If Fe^{+2}, Fe^{+3} and Fe solid are kept together then

(A) $[Fe^{+3}]$ increase
(B) $[Fe^{+3}]$ decrease
(C) Fe^{+2}/ Fe^{+3} remain unchanged
(D) $[Fe^{+2}]$ decrease



Mark out the incorrect statement:

(A) Hexa deutarated benzene gets sulphonated slower than simple benzene

(B) Electrophile in the reaction is SO_3

(C) Dilution of acid during reaction promotes reversal (desulphonating)

(D) Polysulphonation is hard to proceed

To maintain the pH of 7.4 for blood at normal condition which is 2M in H2CO3 (at equilibrium). What volume of 5M NaHCO3 solution is required to mix with 10ml of blood?
$K(H_2CO_3) = 7.8 \times 10^{-7}$
(A) 78.36 ml (B) 102 ml (C) 52.71 ml (D) 89.01 ml