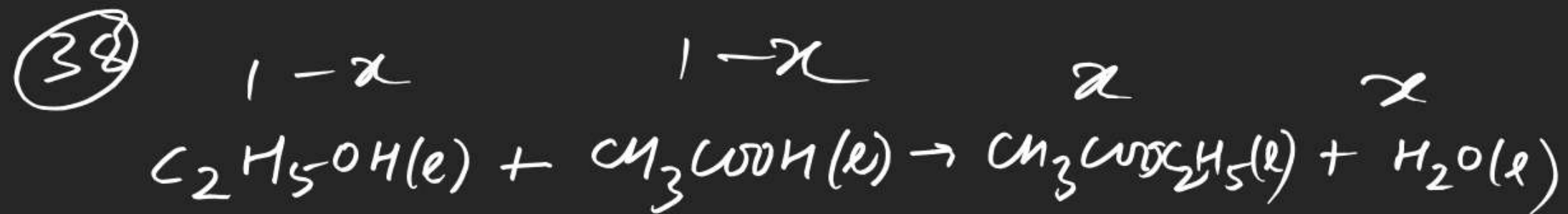
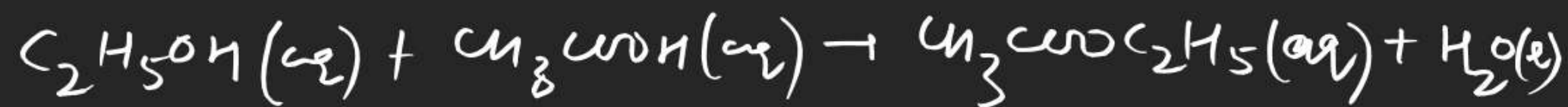


0-1 37-40
52-60

5-1 17-31

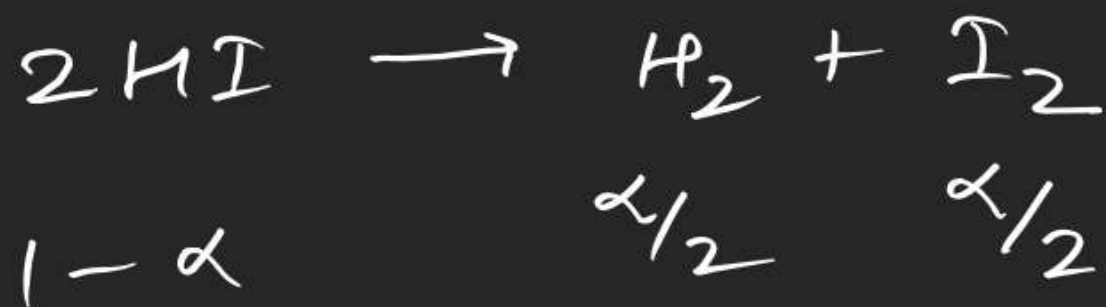


$$K_c = \frac{[\text{CH}_3\text{COOC}_2\text{H}_5][\text{H}_2\text{O}]}{[\text{C}_2\text{H}_5\text{OH}][\text{CH}_3\text{COOH}]}$$



$$K_c = \frac{[\text{CH}_3\text{COOC}_2\text{H}_5]}{[\text{C}_2\text{H}_5\text{OH}][\text{CH}_3\text{COOH}]}$$

55



57



$M_{\text{avg}} \downarrow$

$V.D \downarrow$

K_p

α

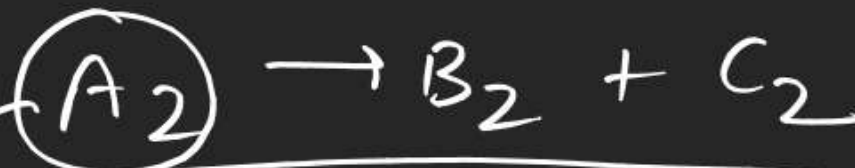
α

M_{avg}

density

$PM = dRT$

59

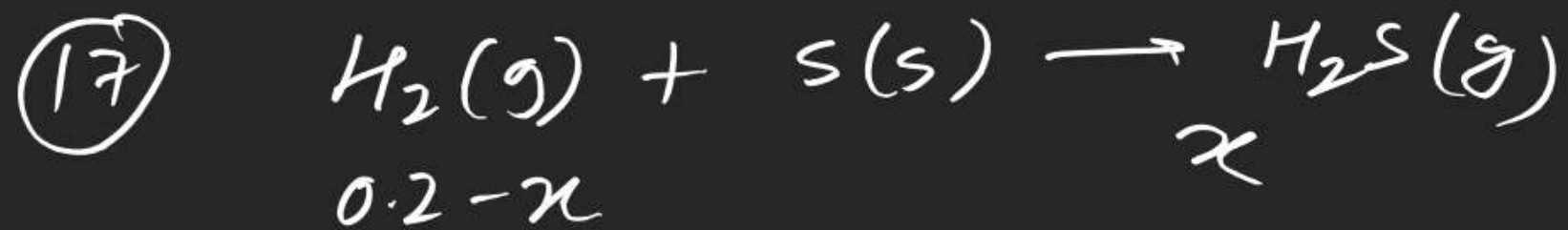


$$K_p = g = \frac{\alpha^2}{1-\alpha} \left(\frac{7}{1+\alpha} \right)$$

$$= \frac{\alpha^2}{1-\alpha^2} \times 7$$

$$\alpha = 3/4 = 0.75$$

$$M_{\text{avg}} = \frac{70}{1+\alpha} = \frac{70}{1.75}$$



$$K = 6.8 \times 10^{-2} = \frac{x}{0.2 - x}$$



$$K_p = 4 \times 10^{-2} = P_{\text{CO}_2}$$

$$4 \times 10^{-2} \times V = n \times R T$$

$$W_{\text{CaO}} = n \times 56$$

(22) $P_{\text{H}_2\text{O}}^5 = (3125) \times 10^{-15}$

$$P_{\text{H}_2\text{O}} = 5 \times 10^{-3}$$

(23) $\frac{1}{P_{\text{H}_2\text{O}}^6} = 64 \times 10^{84}$

$$\frac{1}{P_{\text{H}_2\text{O}}} = 2 \times 10^{14}$$

$$P_{\text{H}_2\text{O}} = \frac{1}{2} \times 10^{-14} = 5 \times 10^{-15}$$

(25)

(31)

$$K_p = \frac{\alpha^2}{1-\alpha^2} p$$

$$1.78 = \frac{\alpha^2}{1-\alpha^2} \times 1$$

$$\alpha$$

$$\downarrow$$

$$M_{avg}$$

$$\downarrow$$

$$PM = dRT$$

$$1.78 = 2.78 \alpha^2$$

$$\sqrt{\frac{1.78}{2.78}} = \alpha$$

$$\sqrt{\frac{89}{139}}$$

Le-chatelier principle : \rightarrow If a system at eqbm is subjected to a change in any one of the parameter like moles, volume, temperature etc, the system try to nullify (compensate) that change as far as possible

① Effect of addition and removal of a substance



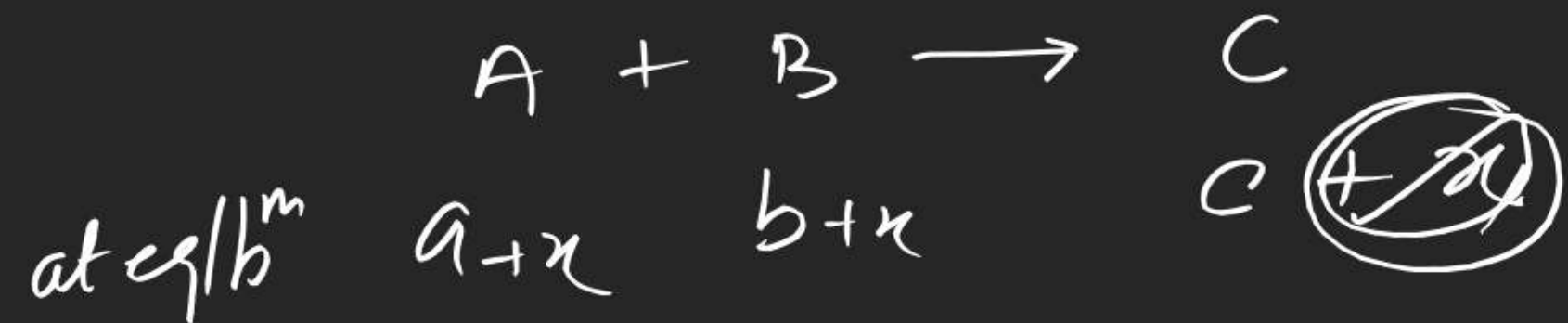
$$K_c = \frac{c}{a \times b} \times V = \frac{[C]}{[A][B]}$$

$\left[\begin{array}{ccccc} \text{add}^n & \text{of reactants at eq}^m & \text{favour forward rxn} \\ \text{"} & \text{product} & \text{"} & \text{"} & \text{backward rxn} \end{array} \right.$



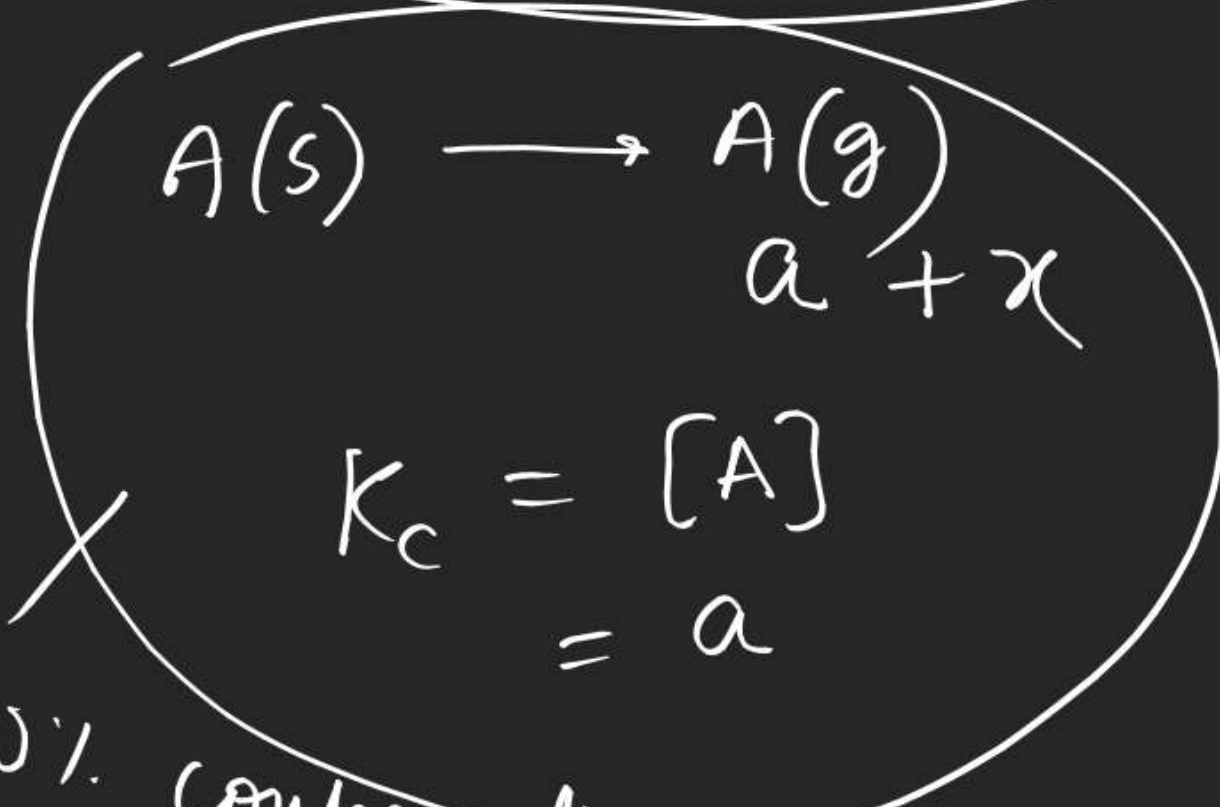
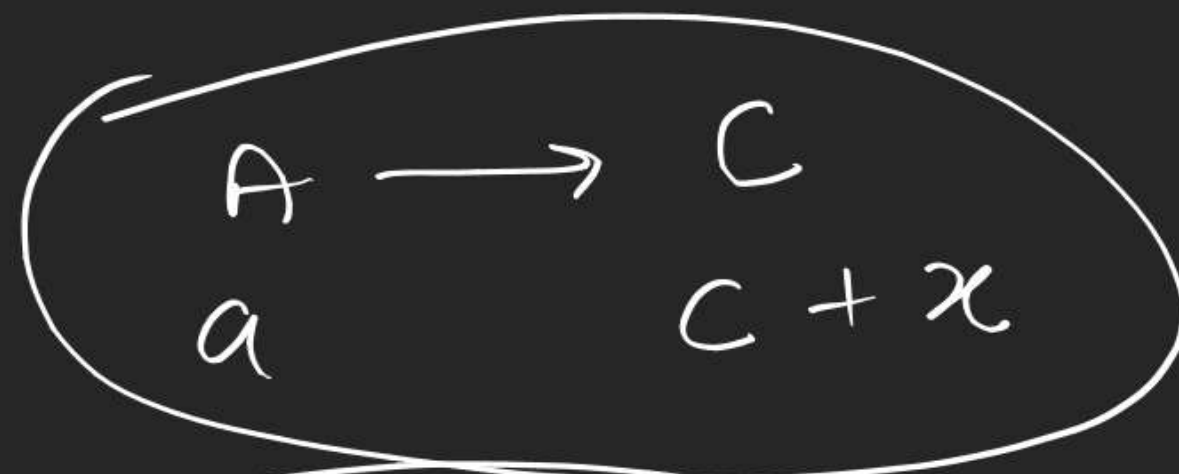
$$K_c = \frac{[H_2S]}{[H_2]}$$

addⁿ of $s(s)$
has no effect



$$K_c = \frac{[C]}{[A][B]} = \frac{c}{a \times b} \times v$$

$$Q > K_c$$



100% compensation occurs

Q. for the given rxn



4	4	2	8
---	---	---	---

} old eq/b^m

the no. of moles
at eq/b^m
was found to be

4	4	2	26
$4+x$	$4+x$	$2-x$	$26-x$

4, 4, 2 & 8
respectively in
1 lit container.

find the no. of moles
at new eq/b^m if 18 moles
of D are added to
above container

$$1 = \frac{(2-x)(26-x)}{(4+x)(4+x)}$$

5	5	1	25
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} new eq/b^m



addⁿ of 'D'



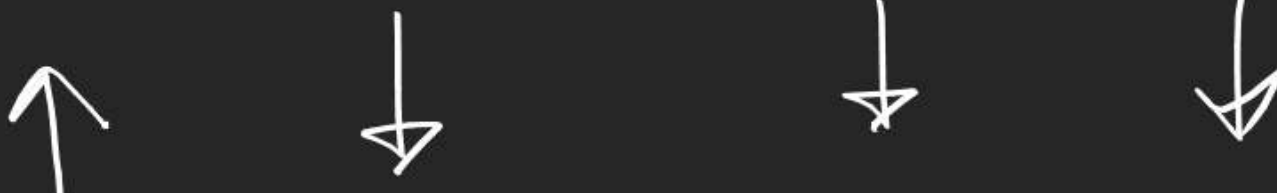
addⁿ of A



addⁿ of C



Removal of B



① Effect of change in pressure

akk 7007

