# DIRECTORATE OF SCHOOL EDUCATION
# TAMILNADU

| 12NPCB02<br>(2023-24) | NEET PRACTICE QUESTIONS<br>(TEST-2) | Class : XII<br>Time : 1.15 hrs<br>Total Marks : 240 |
|---|---|---|

## Answer key

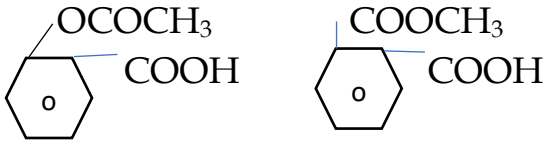
### 12th – CHEMISTRY

16. D) 3 – Hydroxy – 4 – methyl Pentanoic acid

17. C) $Socl_2$

18. B) C > A > B (on the basis of Inter molecular H – bonding)

19. D) Aspirin (Acetyl salicylic acid)



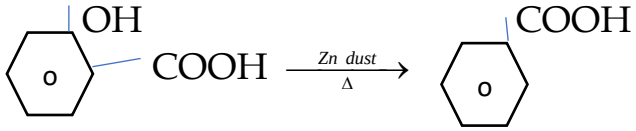

20. A)

21. C) Ethylene

$$CH_3COOH \xrightarrow{LiAlH_4} CH_3CH_2OH \xrightarrow{Pcl_5} CH_3CH_2Cl \xrightarrow[KoH]{alc} CH_2 = CH_2$$

22. A) I > II > III > IV
(+I effect decreases the acidic character of Carboxylic acid and -I effect increase the acidic Character.

23. A) Benzoic acid



24. D) $k_1 / k_2 . k_3^3$
25. C) mostly products
26. C) High pressure and Low temperature
27. D) 7.33
28. D) same
29. D) none
30. B) 2

# DIRECTORATE OF SCHOOL EDUCATION
# TAMILNADU

| 11NPCB02<br>(2023-24) | NEET PRACTICE QUESTIONS<br>(TEST-2) | Class : XI<br>Time : 1.15 hrs<br>Total Marks : 240 |
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## Answer key

### 11th – CHEMISTRY

16. D) $k_1 / k_2 . k_3^3$

On reversing eqn (ii) and reversing and multiplying the eqn (iii) by 3

$2NH_3 \overset{K_1}{\rightleftharpoons} N_2 + 3H_2$ (1)

$N_2 + O_2 \overset{1/k_2}{\rightleftharpoons} 2NO$ (2)

$\dfrac{(H_2 + \frac{1}{2}O_2 \rightleftharpoons H_2O)^{x3}}{2NH_3 + \frac{5}{2}O_2 \rightleftharpoons 2NO + 3H_2O}$ (3)

$\therefore K = K_1 \times \dfrac{1}{K_2} \times \dfrac{1}{K_3^3}$

$= K_1 / K_2 . K_3^3$

17. C) Mostly products

For a reaction A $\rightleftharpoons$ B

$k = \dfrac{[B]_{eq}}{[A]_{eq}} = 1.6 \times 10^{12}$

$1.6 \times 10^{12}$ $[A]_{eq} = [B]_{eq}$

$[B]_{eq} > [A]_{eq}$

So, system will have mostly product

18. Ans : C) High pressure and low temperature

$x_{2(g)} + 4y_{2(g)} \rightleftharpoons 2xy_{4(g)}$

$\Delta ng = 2 - 5 = -3$

5 moles of reactant gives 2 moles of product

According to Lechatlier principle, this system need high pressure and low temperature

19. D) 7.33

$k_f = 1.1 \times 10^{-2}\ m^{-1}$

$k_b = 1.5 \times 10^{-3}\ m^{-1}$

$$k = \frac{k_f}{k_b} = \frac{1.1\times10^{-2}}{1.5\times10^{-3}} = \frac{11}{1.5} = 7.33$$

20. D) the same (In reversible reaction concentration has no effect)

21. D) None

22. B) 2

$$2HI_{(g)} \rightleftharpoons H_{2_{(g)}} + I_{2_{(g)}}$$

| | | |
|---|---|---|
| 2 | 1 | 1 |
| $x$ | – | – |
| $2-x$ | $x/2$ | $x/2$ |

total no of molar = 2- x + $\frac{x}{2} + \frac{x}{2}$

$= 2 - x + x = 2$

23. A)

$$MgCO_{3(s)} \xleftarrow{\Delta} MgO_{(s)} + CO_{2(g)}$$

$$K_p = P_{CO_2}$$

24. B) $1/64$

$$HI_{(g)} \rightleftharpoons \tfrac{1}{2} H_{2(g)} + \tfrac{1}{2} I_{2(g)}$$

$$K = \frac{[H_2]^{1/2}[I_2]^{1/2}}{[HI]} \qquad (1)$$

$$H_{2_{(g)}} + I_{2_{(g)}} \rightleftharpoons 2HI_{(g)}$$

$$K^1 = \frac{[HI]^2}{[H_2][I_2]} \qquad (2)$$

$$K \times \sqrt{K^1} = 1 \qquad \text{From (1) \& (2)}$$

$$K^1 = \frac{1}{K^2} = \frac{1}{8^2} = \frac{1}{64}$$

25. C) $Q < K_C$

*26.* (A) *Kp*

27. B*)* $Kp = Kc \times RT^{-1}$

28. D)

29. $N_2 + 3H_2 \rightleftharpoons 2NH_3$

*1– 0.5 (50%) 3 – 1.5 (50%) 1*

*0.5 1.5 1*

$n_T = 0.5 + 1.5 + 1 = 3$

$$P_{NH_3} = \frac{n_{NH_3}}{n_T} \times P = \frac{1}{3} \times P$$

$$= \frac{P}{3} \text{ (options A)}$$

30. A) 300

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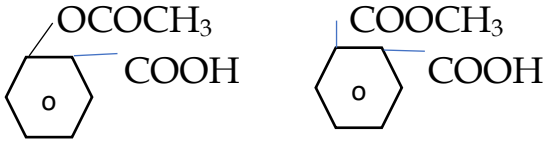


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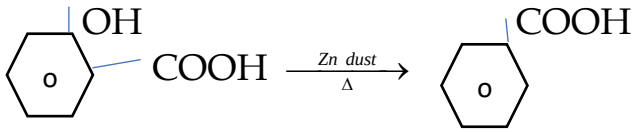

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