Solution of DPP #3

TARGET: JEE (ADVANCED) 2015

Course: VIJETA & VIJAY (ADP & ADR)

CHEMISTRY

6. Correct name is 5-Bromo-2,2-dimethylcyclopent-3-en-1-one.

7.
$$(\pm)$$
 $(cis/trans)$ (\pm)

16. M.F. = $C_8H_8O_2$ Isomers =

Acid strength order

$$= \bigcirc COOH \bigcirc COO$$

17. It is keto-enol tautomerisation reaction which involves recemisation in the product mixture.

All of these are optically inactive.

21._ Br
$$CH_3$$
 CI H CI CH_3 CH_3 CH_3 CH_3 CH_3 CH_3 CH_3 CH_3

(P) is identical with (B).

33. All 5 stereoisomers are achiral.

35.
$$H_{3}C \xrightarrow{C} CH_{3} \xrightarrow{(1) \text{ NaOCl}} H_{3}C = C \xrightarrow{CH_{3}} CH_{3} \xrightarrow{(2) H^{+}} CH_{3} \xrightarrow{(X) O} CH_{3}$$

$$\begin{array}{c|c} H \\ C = C \\ C \\ O \\ O \\ \delta H_3 \end{array} H \xrightarrow{CH_3} H \xrightarrow{C$$

no. of product is one.

40.
$$X = 4$$
 (i, iii, iv, vi) and $Y = 2$ (ii, vi) ; Sum of X and $Y = 4 + 2 = 6$

2M glyceraldehyde = $2 \times 90 = 180 \text{ g/L} = 0.18 \text{ g/ml}$ 41.

length of polarimeter tube = 100 mm = 10 cm = 1dm

$$\alpha_{\text{obs}} = 7.2^{\circ}$$
 ; $[\alpha]_{\text{D}}^{\text{T}} = \frac{7.2}{0.18 \times 1} = +40^{\circ}$

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