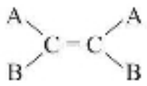
Vidyamandir Classes

Level - 1	DTS-3

31.(BCD) Tautomerism is observed in aldehydes, ketones and vinylic enols including phenol, though phenol is most stable enol.

32.(BCD) For geometrical isomerism :



$(A \neq B)$

Observe carefully.

33.(C) Isomers with different word root are chain isomers.

34.(ABC) Hyperconjugation is shown by alkenes, alkylarenes and carbocations.

35.(A) Mesomeric effect involve delocalization of lone pair of electron, Pi-electron, lone electron, negative charge and positive charge in conjugation with multiple bonds.

36.(C) They have no unpaired electrons, so they are diamagnetic

37.(B) $\underset{\text{Benzylic (Resonance)}}{Ph_3C^+} > \underset{2^\circ\ (6\alpha-H)}{(CH_3)_2\overset{+}{C}H} > \underset{1^\circ\ (3\alpha-H)}{CH_3\overset{+}{C}H_2} > \underset{1^\circ\ (2\alpha-H)}{CH_3CH_2\overset{+}{C}H_2}$

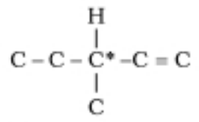
38.(B) $\underset{3^\circ}{(CH_3)_3\dot{C}} > \underset{2^\circ}{(CH_3)_2\dot{C}H} > \underset{1^\circ}{CH_3\dot{C}H_2} > \dot{C}H_3$ (least stable)

Stability is due to increasing number of hyperconjugative structures (more number of $\alpha - H$).

39.(B) Carbanion stability is : $1^\circ > 2^\circ > 3^\circ$

As electron releasing effect increases, stability decreases as a result of intensification of –ve charge.

40.(C)



41.(AD) Enantiomers are non-super imposable mirror images while diastereomers are non-superimposable, non mirror images. Optical isomer having plane of symmetry or centre of symmetry or both are called as meso isomer.

42.(A) Equimolar mixture of enantiomers is called as racemic mixture.

43.(C) Find chiral centre carefully.

44.(C) Organic compound having chiral carbon atom will show optical isomerism.

45.(B) Observe carefully to check plane of symmetry. Butan-2, 3-diol has plane of symmetry hence exist in meso form.