Date Planned : __ / __ / __	Daily Tutorial Sheet-3	Expected Duration : 90 Min
Actual Date of Attempt : __ / __ / __	Level-1	Exact Duration :_____

***31.** Identify the compound that exhibits tautomerism :
(A) 2-Butene **(B)** Vinyl alcohol **(C)** 2-Butanone **(D)** Phenol

***32.** Geometrical isomerism is shown by :
(A) 1, 1-Dichloro-1-pentene **(B)** 1, 2-Dichloro-1-pentene
(C) 1, 3-Dichloro-2-pentene **(D)** 1, 4-Dichloro-2-pentene

33. *n*-pentane, iso-pentane, and neo-pentane are examples for isomers of the type:
(A) Geometrical **(B)** Optical **(C)** Chain **(D)** Positional

***34.** Hyperconjugation is possible in :
(A) Propene **(B)** Toluene **(C)** Ethylcarbocation **(D)** Ethylcarbanion

35. Mesomeric effect involves delocalization of :
(A) pi-Electrons **(B)** Sigma Electrons **(C)** Protons **(D)** None of these

36. Which of the following is not true for carbanions?
(A) The carbon carrying the charge has eight valence electrons
(B) They are formed by heterolytic fission
(C) They are paramagnetic
(D) The carbon carrying the charge is sp^3 hybridised

37. Which is the most stable carbocation ?
(A) iso-Propyl **(B)** Triphenylmethyl **(C)** Ethyl **(D)** n-Propyl

38. Which of the following orders regarding relative stability of free radicals is correct ?
(A) $3° < 2° < 1°$ **(B)** $3° > 2° > 1°$ **(C)** $1° < 2 > 3°$ **(D)** $3° > 2° < 1°$

39. Which is correct order of stability of carbanions ?
(A) $2° > 1° > 3°$ **(B)** $1° > 2° > 3°$ **(C)** $1° < 2° < 3°$ **(D)** $3° > 1° > 2°$

40. Out of the following, the alkene that exhibits optical isomerism is :
(A) 3-Methyl-2-pentene **(B)** 4-Methyl-1-pentene
(C) 3-Methyl-1-pentene **(D)** 2-Methyl-2-pentene

***41.** Which among the following statements is correct with respect to the optical isomers ?
(A) Enantiomers are non-superimposable mirror images
(B) Diastereomers are superimposable mirror images
(C) Enantiomers are superimposable mirror images
(D) Meso forms have a plane of symmetry

42. Racemic mixture has :
(A) Equimolar mixture of enantiomers **(B)** 1 : 1 mixture of enantiomer and diastereomer
(C) 1 : 1 mixture of diastereomers **(D)** 1 : 2 mixture of enantiomers

43. Which of the following compounds is expected to be optically active ?
(A) $(CH_3)_2CHCHO$ **(B)** $CH_3CH_2CH_2CHO$ **(C)** $CH_3CH_2CHBrCHO$ **(D)** $CH_3CH_2CBr_2CHO$

44. Which one of the following compound will show optical isomerism ?

(A) $(CH_3)_2CH-CH_2-CH_3$ **(B)** $CH_3-CHOH-CH_3$

(C) $CH_3-CHCl-CH_2-CH_3$ **(D)** $CH_3-CCl_2-CH_2-CH_3$

45. Which of the following will have a meso-isomer also ?

(A) 2-Chlorobutane **(B)** Butan-2, 3-diol

(C) 2, 3-Dichloropentane **(D)** 2-Hydroxypropanoic acid