Daily Tutorial Sheet [DTS] | Hydrocarbons

Level-1 — DTS 1-5

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
C	C	C	C	A	C	B	C	D	A	B	C	D	C	C
16	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
B	D	B	C	D	A	B	A	A	C	A	A	A	C	D
31	**32**	**33**	**34**	**35**	**36**	**37**	**38**	**39**	**40**	**41**	**42**	**43**	**44**	**45**
A	C	D	B	B	D	B	D	D	D	B	A	D	B	C
46	**47**	**48**	**49**	**50**	**51**	**52**	**53**	**54**	**55**	**56**	**57**	**58**	**59**	**60**
D	A	AC	B	D	A	D	B	A	C	D	C	A	B	B
61	**62**	**63**	**64**	**65**	**66**	**67**	**68**	**69**	**70**	**71**	**72**	**73**	**74**	**75**
BCD	A	B	C	A	B	AB	B	A	ABCD	A	B	D	B	C

Level-2 — DTS 6-11

76	77	78	79	80	81	82	83	84	85	86	87	88	89	90
B	A	B	A	B	A	D	A	ABCD	A	B	A	B	D	D
91	**92**	**93**	**94**	**95**	**96**	**97**	**98**	**99**	**100**	**101**	**102**	**103**	**104**	**105**
C	C	C	A	C	C	D	B	C	C	BD	B	C	ABCD	A
106	**107**	**108**	**109**	**110**	**111**	**112**	**113**	**114**	**115**	**116**	**117**	**118**	**119**	**120**
D	D	D	D	C	C	D	B	B	A	C	B	A	B	C
121	**122**	**123**	**124**	**125**	**126**	**127**	**128**	**129**	**130**	**131**	**132**	**133**	**134**	**135**
B	A	ABD	ABC	B	2	2	6	7	5	3	7	2	3	4
136	**137**	**138**	**139**	**140**										
3	3	7	9	3										

JEE Main (Archive) — DTS 1-3

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
C	B	A	B	B	A	B	B	B	A	C	A	D	B	D
16	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
C	B	A	D	B	C	A	C	D	C	B	B	C	D	D
31	**32**	**33**	**34**	**35**	**36**	**37**	**38**	**39**	**40**	**41**	**42**	**43**	**44**	**45**
B	C	B	D	B	A	C	B	B	A	C	D	D	13.00	D
46														
B														

1. Tollen's reagent **2.** B **3.** D **4.** Ethyne

5. $(CH_3)_2C=CH-CH_3$ **6.** $C_2H_4 \xrightarrow[CCl_4]{Br_2} \xrightarrow[2eq.]{NaNH_2} HC\equiv CH$ **7.** D

8. $3C_3H_6 + 2KMnO_4 + 4H_2O \longrightarrow 3CH_3CH(OH)CH_2OH + 2MnO_2 + 2KOH$ **9.** False **10.** C

11. C **12.** B **13.** 2-butyne

14. (i) Free radical mechanism (ii) Markovnikov's rule **15.** A

16. (i) HBr/peroxide (ii) Due to acidic nature of terminal alkyne. **17.** A

18. sp^3 **19.** $H-C\equiv C-H + Na \xrightarrow{heat} \xrightarrow{CH_3I} CH_3-C\equiv CH \xrightarrow[HgSO_4]{H_2SO_4} \underset{\text{acetone}}{CH_3-\overset{\overset{O}{\|}}{C}-CH_3}$

20. Tollen's reagent or fehling's test **21.** B

22. (A) $(CH_3)_2CHCH(Cl)CH_2CH_3$ (B) $(CH_3)_2CHCH=CHCH_3$ (C) $(CH_3)_2C=CHCH_2CH_3$

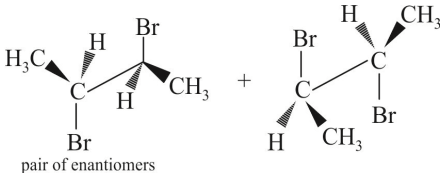
23. AD **24.** B **25.** C **26.** D

27. $3C_2H_4 + 2KMnO_4 + 4H_2O \longrightarrow 3HOCH_2CH_2OH + 2MnO_2 + 2KOH$ **28.** Baeyer's reagent. **29.** B

30. H_2SO_4 & $HgSO_4$ **31.** Ethene

32. (i) (A) $CH_3CH=CHCH_3$ (ii) (B) $(CH_3)_2C=CH_2$ **33.** (A) O_3, (B) KO_3, (C) O_2

34.



pair of enantiomers

35. $(CH_3)_2CH-CH=CH_2$

36. (X) $(CH_3)_2CHC(Cl)(CH_3)_2$ (Y) $(CH_3)_2CHC(CH_3)=CH_2$ (Z) $(CH_3)_2C=C(CH_3)_2$

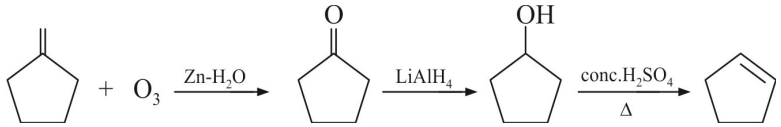
37. (a) $CH_3CH(Br)CH(CH_3)CH_2CH_3$ (b) $CH_3CH(Br)C(OH)(CH_3)CH_2CH_3$ (c) $CH_3(C_2H_5)_2COH$

38. A **39.** D **40.** 1, 4-dibromo-2-butene **41.** 3-Hexene

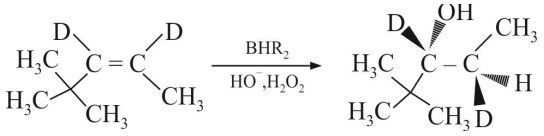
42. C **43.** C **44.** A **45.** (A) $C_6H_5CH(Br)CH_2Br$ (B) $C_6H_5C\equiv CCH_3$

46. A **47.** D

48. **(a)**



(b)



$R = (CH_3)_2CHCH_2$

49. D **50.** B **51.** C **52.** C **53.** B

54. B **55.** B **56.** A **57.** Syn-addition across $C\equiv C$

58. B **59.** D **60.** X : 3-Hexyne ; Y : cis-3-Hexene ; Z : Meso-hexane-3, 4-diol

61. B **62.** C **63.** B **64.** A **65.** B

66. A **67.** A **68.** B **69.** C **70.** D

71.	A	**72.**	$CH_2 = C(CH_3)CH = CH_2$	**73.**	B	**74.**	B
75.	B	**76.**	C	**77.**	B	**78.**	B
79.	A	**80.**	D	**81.**	A	**82.**	B
83.	A	**84.**	C	**85.**	D	**86.**	C
87.	D	**88.**	B	**89.**	D	**90.**	D
91.	5	**92.**	C	**93.**	8	**94.**	A
95.	B	**96.**	A	**97.**	B	**98.**	D
99.	ABC	**100.**	BD	**101.**	D	**102.**	AB
103.	B	**104.**	5	**105.**	BCD	**106.**	A
107.	B	**108.**	D	**109.**	B	**110.**	CD
111.	D	**112.**	A	**113.**	B	**114.**	A
115.	CD	**116.**	135				