

# **CHEMISTRY**

# **JEE MAIN AND ADVANCED**

# **MOCK TEST 34**

**Example** 

1. Ethylidene chloride is a/an

A. Gem-dihalide

B. Allylic halide

C. Vinylic halide

D. Vic-dihalide

# **Answer: A**



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**2.** Which of the following will not lead to the formation of an alkyl halide?

A. 🖳







## **Answer: D**



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**3.** Which one of the following is liquid at room temperature?

A.  $CH_3Cl$ 

B.  $C_2H_5Cl$ 

C.  $CH_3Br$ 

D.  $C_2H_5Br$ 

# **Answer: D**



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**4.** The correct order of boiling points of alkyl halides is

A.  $CH_3F>CH_3Cl>CH_3Br>CH_3I$ 

B.  $CH_3F>CH_3Br>CH_3Cl>CH_3I$ 

C.  $CH_3I > CH_3Br > CH_3Cl > CH_3F$ 

D.  $CH_3Cl > CH_3Br > CH_3F > CH_3I$ 

#### **Answer: C**



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**5.** Which of the following alkyl halide will undergo  $S_N \mathbf{1}$  reaction is

A. 
$$(CH_3)_3C - F$$

B. 
$$(CH_3)_3C-Cl$$

$$C.(CH_3)_3C-Br$$

D. 
$$(CH_3)_3C - I$$

## **Answer: D**



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**6.** The compound which is least reactive among the following in a nucleophilic substitution reaction is

A. 
$$CH_2=CHCl$$

B.  $CH_3CH_2Cl$ 

$$\mathsf{C.}\,\mathit{CH}_2 = \mathit{CHCH}_2\mathit{Cl}$$

D.  $(CH_3)_3C-Cl$ 

# **Answer: A**



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I) Rearrangement is possible.

**7.** Which of the following statement(s) is/are incorrect regarding  $S_N1$  reaction?

II) Proceeds with complete inversion of configuration.

III) Rate depends on polarity of solvent.

IV) The strength of the nucleophile is important in rate determining step.

A. II,IV only

B. I, II, IV only

C. III only

D. I, II only

**Answer: A** 



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**8.** Which of the following molecules contain a chiral centre?

A. 2-chloropropan-2-ol

B. 1-chlorobutane

C. 2-chloropropane

D. 2-chlorobutane

**Answer: D** 



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9. Two enantiomers differ with respect to

A. Melting point

B. Refractive index

C. Direction of rotation of plane polarised

light

D. Solubility in achiral solvents

**Answer: C** 



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10. The correct statement regarding the transition state of a  $S_{N}2$  reaction in alkyl halides

A. Lower in energy than the starting materials

B. Involves both the nucleophile and leaving group

C. Closely resembles a carbonium ion intermediate

D. The carbon where substitution takes  $\label{eq:place} \mbox{place is } sp^3 \mbox{ hybridised}$ 

**Answer: B** 



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**11.** Nucleophilic substitution reaction of optically active halide, PIC is accompanied by

A. Inversion of configuration

B. Retention of configuration

C. Racemisation

D. Both (1) and (3)

## **Answer: C**



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**12.** The correct order of ease of elimination of following groups in the E2 reaction is

A. 
$$-F>$$
  $Cl>$   $Br>$   $I$ 

$$extsf{B.} - I > -Br > -F >_C l$$

$$\mathsf{C.} - I > -Br > -Cl > -F$$

$$\mathsf{D.} - F > \ - Cl > \ - I > \ - Br >$$

# **Answer: C**



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