



CHEMISTRY

AAKASH INSTITUTE ENGLISH

MOCK TEST 34

Example

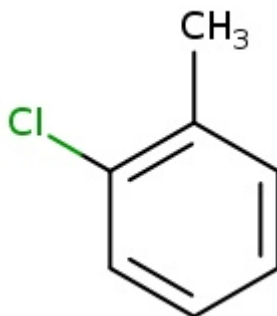
1. Ethylidene chloride is a/an.....

- A. Gem-dihalide
- B. Allylic halide
- C. Vinylic halide
- D. Vic-dihalide

Answer: A



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2. IUPAC nomenclature of PIC is

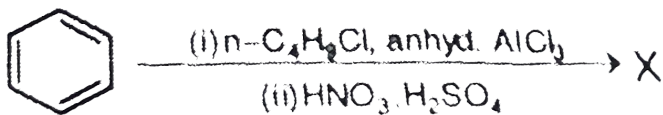
- A. Benzylchloride
- B. Chlorophenylmethane
- C. 1-chloro-2-methylbenzene
- D. Benzoylchloride

Answer: B



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3. Major product of the given reaction is



A. 

B. 

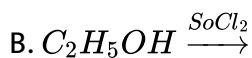
C. 

D. 

Answer: C

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



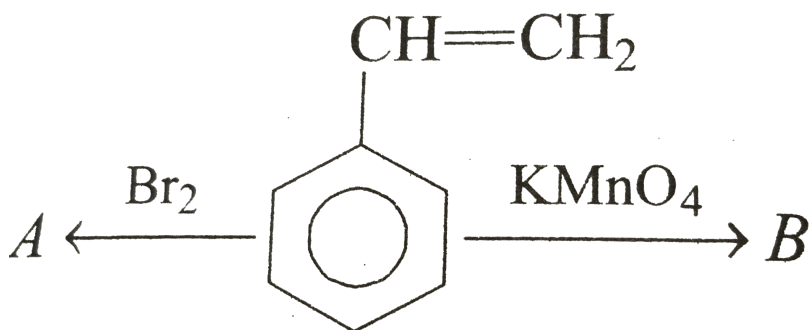
C. Both 1 and 2

D. None of these

Answer: D

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5. PIC Compounds (A) and (B) are respectively



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6. For the reaction $\text{C}_2\text{H}_5\text{OH} + \text{HX} \rightarrow \text{C}_2\text{H}_5\text{X} + \text{H}_2\text{O}$, the order of reactivity is

A. $\text{HI} > \text{HBr} > \text{HCl}$

B. $HCl > HBr > HI$

C. $HCl > HI > HBr$

D. $HBr > HI > HCl$

Answer: A

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7. The p-orbital is in the shape of a _____

A. Sphere

B. Dumbbell

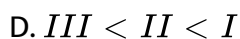
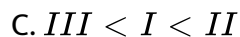
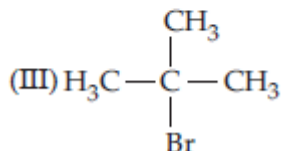
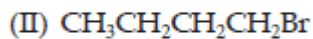
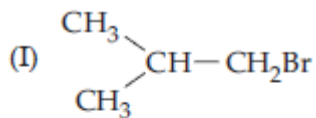
C. Pear-shaped lobe

D. None of the mentioned

Answer: B

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8. Arrange the following compounds in increasing order of their boiling points

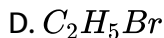
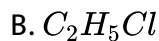


Answer: C



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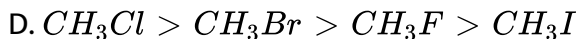
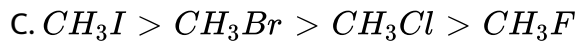
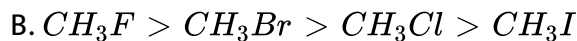
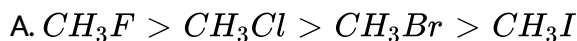
9. Which one of the following is liquid at room temperature?



Answer: D

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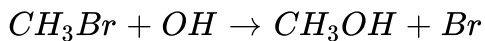
10. The correct order of boiling points of alkyl halides is



Answer: C

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11. For P_1C , the rate of reaction is given by the expression



A. $\text{Rate} = k[\text{CH}_3\text{Br}]$

B. $\text{Rate} = k[\text{OH}^-]$

C. $\text{Rate} = k[\text{CH}_3\text{Br}][\text{OH}^-]$

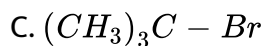
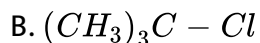
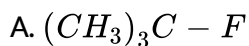
D. $\text{Rate} = k[\text{CH}_3\text{Br}][\text{OH}^-]^{-1}$

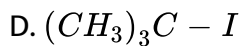
Answer: C



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12. Which of the following alkyl halide will undergo $\text{S}_\text{N}1$ reaction is

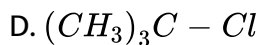
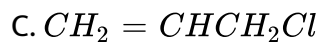
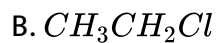
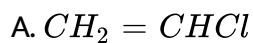




Answer: D

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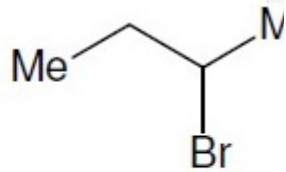
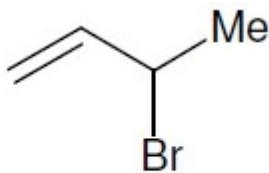
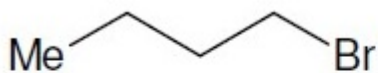
13. The compound which is least reactive among the following in a nucleophilic substitution reaction is



Answer: A

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14. The correct order of reactivity of the following bromides towards S_N1 reaction is



A. $I > II > III$

B. $III > II > I$

C. $II > III > I$

D. $II > I > III$

Answer: C



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

I) Rearrangement is possible.

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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16. 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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17. Two enantiomers differ with respect to

A. Melting point

B. Refractive index

C. Direction of rotation of plane polarised light

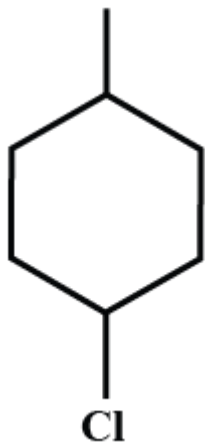
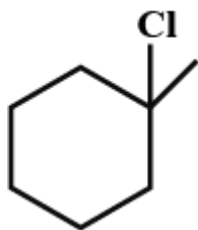
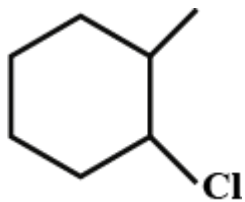
D. Solubility in achiral solvents

Answer: C



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18. Among the given halides, which will give same product in both S_N1 and S_N2 reactions(excluding stereoisomers)?



A. III only

B. III and IV only

C. I and II only

D. I, II and IV only

Answer: B

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19. The correct statement regarding the transition state of a S_N2 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 place is sp^3 hybridised

Answer: B

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20. 1-Bromopentane is more reactive towards

A. S_N2 and S_N1

B. S_N1 and S_N2

C. Both S_N1

D. Both S_N2

Answer: B



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21. Hybridisation of Acetylene is ____

A. sp

B. sp^2

C. sp^3

D. dsp^2

Answer: C

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22. 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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23. Shape of PCl_5 molecule is __

A. Trigonal Planar

B. Linear

C. Trigonal bipyramidal

D. Tetrahedral

Answer: B

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24. Number of chlorine atoms which form equatorial bonds in PCl_5 molecule are _

A. 1

B. 2

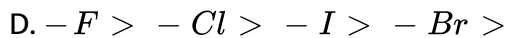
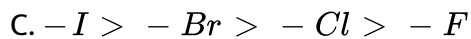
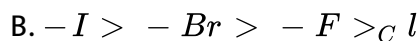
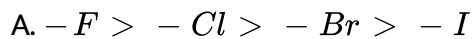
C. 3

D. 4

Answer: B

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

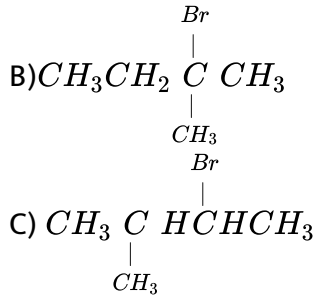


Answer: C

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26. Arrange the following compounds in order of ease of dehydrohalogenation by concentrated alcoholic KOH





A. $C < B < A$

B. $A < B < C$

C. $B < C < A$

D. $B < A < C$

Answer: B



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27. The percentage p-character in sp^3 hybridisation is _____

A. 25%

B. 50%

C. 75%

D. 66.6%

Answer: C

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28. Do we call metal carbonyls as organometallics?

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29. The hybridisation of BeF_3 – is _____

A. sp^3

B. sp^2

C. sp

D.  

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