

## JEE MAIN : CHAPTER WISE TEST-7

SUBJECT :- CHEMISTRY

DATE.....

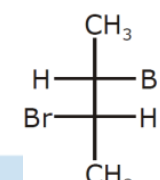
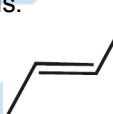

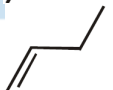

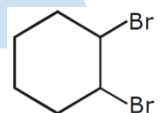
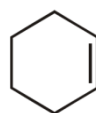
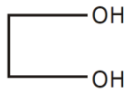
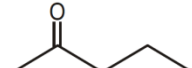
CLASS :- 12<sup>th</sup>

NAME.....

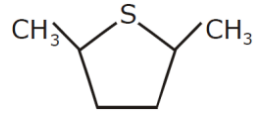
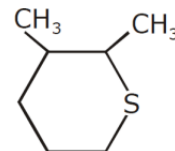
CHAPTER :- ALKYL HALIDE

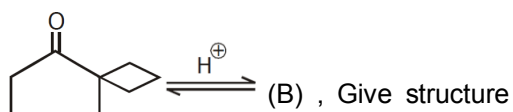
SECTION.....

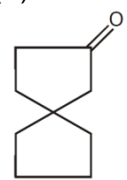
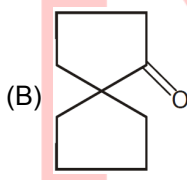
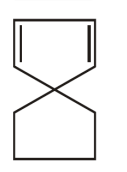
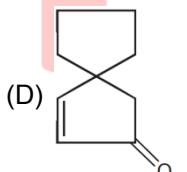
## (SECTION A)

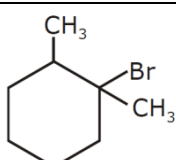
1. Which reaction is termed as Darzen's Reaction?  
 (A) ROH + HCl (B) ROH + PCl<sub>5</sub>  
 (C) ROH + SOCl<sub>2</sub> (D) ROH + PCl<sub>3</sub>
2. The best reagent for converting ethanol to chloroethane is -  
 (A) PCl<sub>3</sub> (B) PCl<sub>5</sub>  
 (C) SOCl<sub>2</sub> (D) HCl + ZnCl<sub>2</sub>
3. In Hunsdiecker reaction -  
 (A) A sodium salt of an acid reacts with bromine.  
 (B) A calcium salt of an acid reacts with HBr.  
 (C) A silver salt of an acid reacts with bromine.  
 (D) A silver salt of an acid reacts with HBr.
4. Chlorobenzene is -  
 (A) More reactive than ethyl bromide.  
 (B) More reactive than isopropyl chloride.  
 (C) As reactive as methyl chloride.  
 (D) Less reactive than benzyl chloride.
5. When ethyl bromide is treated with moist Ag<sub>2</sub>O the product is -  
 (A) Ethyl ether  
 (B) Ethanol  
 (C) Ethoxyethane  
 (D) All of the above
6.  $\text{CH}_3\text{Br} \xrightarrow{\text{AgCN}} \text{A} \xrightarrow{\text{H}_2\text{O}^+} \text{B}$ , [B] is -  
 (A) CH<sub>3</sub> NH<sub>2</sub> (B) (CH<sub>3</sub>) NH  
 (C) C<sub>2</sub>H<sub>5</sub> NH<sub>2</sub> (D) CH<sub>3</sub>COOH
7. 2,2-Dichloropropane on hydrolysis yields -  
 (A) Acetone  
 (B) 2,2-Propane diol  
 (C) Isopropyl alcohol  
 (D) Acetaldehyde
8.  $\text{CH}_3 - \overset{\text{O}}{\parallel}{\text{C}} - \text{CH}_3 \xrightarrow[\text{Na}_2\text{CO}_3]{\text{I}_2} \text{(A)}$   
 $\xrightarrow{\text{Ag powder}} \text{(B)} \xrightarrow[\text{Hg}^{++}]{\text{H}_2\text{SO}_4} \text{(C)}$   
 Product A, B & C are -  
 (A) Iodoform, acetylene & acetaldehyde  
 (B) Tri-iodomethane, ethyne & acetone  
 (C) Iodoform, ethene & ethylene glycol  
 (D) Ethene, iodoform & ethylhydrogen sulphate
9. Isocyanide reaction involves the intermediate formation of -  
 (A) :CCl<sub>2</sub> (B) CH<sub>3</sub><sup>+</sup>  
 (C) CH<sub>3</sub><sup>-</sup> (D) CCl<sub>3</sub><sup>•</sup>
10. Chloroform when treated with aniline and alcoholic KOH forms -  
 (A) Phenyl cyanide  
 (B) Phenyl isocyanide  
 (C) Phenyl cyanate  
 (D) Phenyl isocyanate
11. The hydrogen atom in chloroform is -  
 (A) Acidic (B) Basic  
 (C) Neutral (D) None of these
12.   $\xrightarrow[\Delta]{\text{Zn-dust}}$  (p). The product (p) is.  
 (A)  (B)   
 (C)  (D) 
13.   $\xrightarrow{\text{Zn}}$   + ZnBr<sub>2</sub>  
 This reaction is a case of  
 (A) α-elimination (B) β-elimination  
 (C) γ-elimination (D) none of these
14. **Reaction** **Rate of reaction**  
 (A) HO<sup>+</sup> + R - CH<sub>2</sub> - I → (P) 1  
 (B) HO<sup>-</sup> + R - CH<sub>2</sub> - Br → (Q) 200  
 (C) HO<sup>-</sup> + R - CH<sub>2</sub> - Cl → (R) 10,000  
 (D) HO<sup>-</sup> + R - CH<sub>2</sub> - F → (S) 30,000  
 (A) A → S → B → R → C → Q → D → P  
 (B) A → Q → B → R → C → S → D → P  
 (C) A → S → B → Q → C → R → D → P  
 (D) A → Q → B → R → C → S → D → P
15. A gem dichloride is formed in the reaction except:  
 (A) CH<sub>3</sub>CHO and PCl<sub>5</sub>  
 (B) CH<sub>3</sub>COCH<sub>3</sub> and PCl<sub>5</sub>  
 (C)   $\xrightarrow{2\text{PCl}_5}$   
 (D)   $\xrightarrow{\text{PCl}_5}$

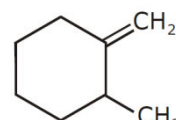
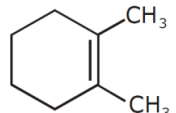
16. In the given reaction
- $$\text{CH}_3 - \overset{\text{O}}{\parallel}{\text{C}} - \text{H} - \text{CH}_2 - \text{CH}_2$$
- $$\text{OTs}$$
- $$\text{---CH---CH}_3 \xrightarrow[\text{(ii) KOH}]{\text{(i) } \bar{\text{S}}\text{H (one equivalent)}} [\text{X}],$$
- $$\text{OTs}$$
- will be.

- (A)  $\text{CH}_3 - \overset{\text{O}}{\parallel}{\text{C}} - \text{CH} - \text{CH}_2 - \text{CH}_2 - \overset{\ominus}{\text{S}} - \text{CH} - \text{CH}_3$
- (B)  $\text{CH}_3 - \overset{\ominus}{\text{S}} - \text{CH} - \text{CH}_2 - \text{CH}_2 - \overset{\ominus}{\text{S}} - \text{CH} - \text{CH}_3$
- (C) 
- (D) 

17.  (B), Give structure of (B).

- (A) 
- (B) 
- (C) 
- (D) 

18. 
- The major products obtained when this substrate to E2 reaction under the treatment of potassium tertbutoxide will be:

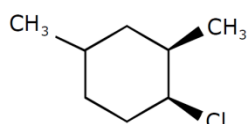
- (A) 
- (B) 
- (C) both in equal proportions
- (D) none of these

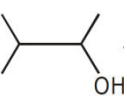
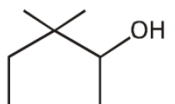
19.  $\text{CH}_3\text{O} - \text{CH} = \text{CH}_2 \xrightarrow[\text{H}^+]{\text{CH}_3\text{OH}}$
- Product formed is:
- (A) Acetal (B) Hemiacetal
- (C) Alcohol (D) Aldehyde

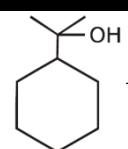
20. Which of the following expressions is the experimentally observed rate law for an E2 reaction of alkyl halide ?
- (A) Rate = k [RX]
- (B) Rate = k [RX]<sup>2</sup>
- (C) Rate = k [RX][base]
- (D) Rate = k [base]

(SECTION B)

21. The number of steps involved in SN<sub>1</sub> mechanism are given by the set -

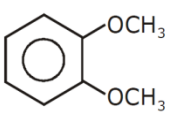
22. 
- Total number of S<sub>N</sub>1 products of given compound are

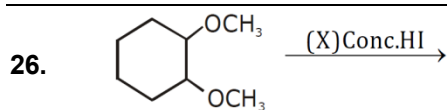
23. (i)   $\xrightarrow[\Delta]{\text{H}^+}$  (A) Major
- (ii)   $\xrightarrow[\Delta]{\text{H}^+}$  (B) Major

- (iii)   $\xrightarrow[\Delta]{\text{H}^+}$  (C) Major

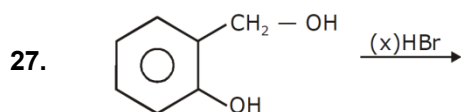
Total number of α-hydrogen in A + B + C is

24. The bond energy (in kcal mol<sup>-1</sup>) of a C–C single bond is approximately

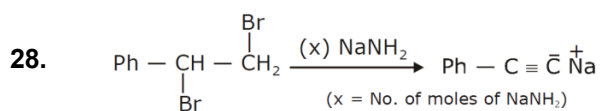
25.   $\xrightarrow{\text{(x) conc. HI}}$
- Value of x in above reaction is:



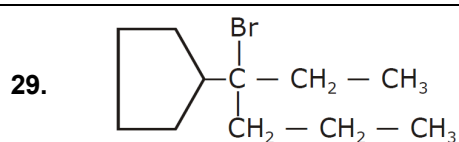
x = moles of HI consumed.  
Value of x is:



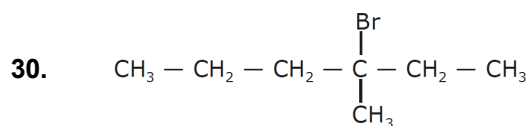
Value of (x) is:



Value of x is :



Total number of products obtained when this substrate is subjected to E2 reaction will be (including stereoisomer):



Total number of SN1 + E1 products obtained will be -

PE