DPP No: 17

SYLLABUS: Haloalknes & Haloarenes

1.	Which one	of the	following	compound is most	reactive f	or E1	reaction?

CH₃

$$CH_3-CH_2-CH_2-CH_3 \xrightarrow{CH_3OH} P \text{ (Major elimination product)}$$
Br

The major elimination (E-1) product P is:

$$(A)CH3-CH = C < CH2-CH3$$

$$CH2-CH3$$

(B)
$$CH_2 = CH < CH_2 - CH_3$$

 $CH_2 - CH_3$

- 3. Correct statement for E1 Reaction is :
 - (A) It is a two step process.

- (B) Rearrangement is possible.
- (C) Good leaving group favours
- (D) All of these
- 4. Intermediate formed during E1 reaction is –
 - (A) Carbocation
- (B) Carbanion
- (C) Free radical
- (D) Carbene
- 5. Which of the following can work as dehydrating agent for alcohols?
- (A) H_2SO_4 (B) AI_2O_3 (C) H_3PO_4
- (D) All of these
- 6. Elimination of HBr from 2-bromobutane result in the formation of :
 - (A) Predominantly 2-butyne
- (B) Predominantly 1-butene
- (C) Predominantly 2-butene
- (D) Equimolar mixture of 1 and 2-butene
- 7. Correct statement for E2 Reaction is:
 - (A) It is a two step process.
- (B) It is an unimolecular reaction

(C) Strong base favours

(D) Carbanion is formed during the reaction

8. Alkyl halide with alcoholic KOH gives -(A) Alkane (B) Acoholic salt (C) Alkene (D) Alcohol 9. Intermediate of E2 reaction is -(A) Carbocation (B) Carbanion (C) Free radical (D) Intermediate is not Formed $CH_3-C-CH_2Br \xrightarrow{Alc.KOH} Alkene$, 10. Alkene is -Which of the following cannot undergo E2 reaction? 11. 12. 2-Chlorobutane on treatment with alcoholic KOH/\(\Delta \) gives major product : (A) 2-Butene (B) 1-Butene (C) 2-Butanol (D) 1-Butyne 13. The most probable product is the following reaction: alc.KOH (excess) ∆ CI CH₃–CH–CH–CH₃ <u>t-BuO</u>→ Major Product is : CH₃ 14. (A) CH₃-C=CH-CH₃ (B) CH₃-CH-CH=CH₂ (C) CH₂=C-CH₂-CH₃ (D) CH₃-CH-CH-CH₃ I I I CH₃ CH₃ CH₃ CH₃ CH₄ CH₅ C MeO⁻K⁺ ➤ X Major CH₃-CH-C(Br)CH₃-15. CH₃ CH₃ X and Y are respectively: and

- 16. 2-Bromopentane is heated with potassium ethoxide in ethanol. The major product is -
 - (A) trans-2-pentene (B) 2-ethoxypentane (C) 1-pentene (D) cis-2-pentene

- \bigcap KOH, Δ Major Product is :

- 18. Major product of given reaction is-

$$O_2N-CH_2-CH-CH_3 \xrightarrow{OH \atop \Delta}$$
 Major product

(A) O₂N-CH=CH-CH₃

(B) O₂N-CH₂-CH=CH₂

(C) O₂N-CH=C-CH₃

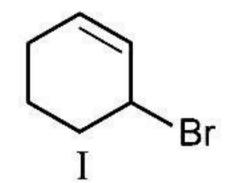
- 19.
 - [X] as the major product among the elimination products is :

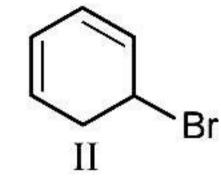
(A)
$$C = CH_2$$
 (B) $C - CH_3$ (C) CH_3 (C) CH_3 (D) CH_3

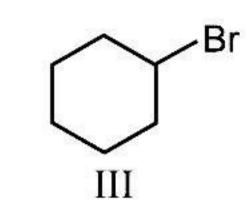
 $\begin{array}{c|c}
\hline
& \text{aq. Acetone} \\
\hline
& \text{Step-1}
\end{array}
\begin{array}{c}
\hline
& \text{Conc. H}_3PO_4, \Delta \\
\hline
& \text{Step-2}
\end{array}
\begin{array}{c}
\hline
& \text{Product}
\end{array}$ 20.

Intermediates for both the steps are respectively?

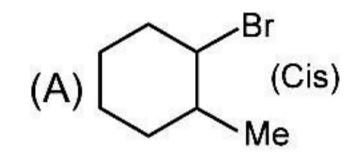
- (A) Carbocation & No intermediate
- (B) No intermediate & carbocation
- (C) Carbocation & carbanion
- (D) Carbocation & carbocation
- Arrange the following in decreasing order of stability of their transition state during elimination 21. by strong base







- III < I < II (A)
- (B) II > III > I
- (C) I > III > II
- (D) I > II > III
- 22. Which of the following will undergo fastest elimination reaction with alcoholic KOH.



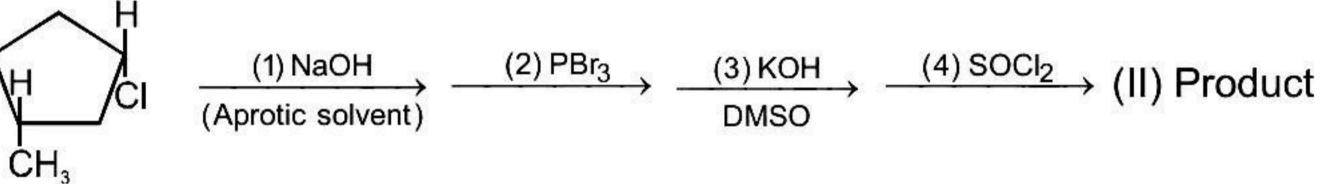
- (B) (trans)
- (C) No
- (D) Me B
- 23. Which of the following statement not correctly describe E1 reactions of alkyl halides (RX)?
 - (A) Rearrangement is possible.
- (B) Rate = k [Base] [RX]

(C) Rate = k [RX]

- (D) The reaction occur in two or more distinct steps
- 24. Which mechanism has different reactivity order of alkyl halides (1°, 2°, 3°) than others :
 - $(A) S_N 1$

- $(B) S_N 2$
- (C) E1
- (D) E2

25.



(I) (Reactant)

In this reaction I and II are,

(A) Enantiomers

(B) Structure isomers

(C) Geometrical isomers

(D) Identical compounds

ANSWER KEY

- (B) 5. (D) (D) (D) (C) 7. (C) 3. (A) 6. 2. 4. (C) 10. (A) 9. (D) 11. (C) 12. (A) 13. (A) 14. (B) 8.
- 15. (A) 16. (A) 17. (B) 18. (A) 19. (C) 20. (D) 21. (A)
- 22. (A) 23. (B) 24. (B) 25. (C)