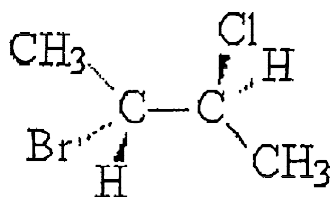


M/P ENT - 14

- 19) Differential scanning calorimetry (DSC) is a technique in which the ——— flow difference between the sample and reference material is monitored while both are subjected to the controlled temperature program.
- A) heat
B) mass
C) temperature
D) enthalpy
- 20) In TGA the graph is preferably plotted as _____.
- A) mass (mg) Vs temperature/time
B) weight (mg) Vs temperature/time
C) weight% Vs temperature/time
D) weight (g) Vs temperature/time
- 21) Which of the following molecules is IR active?
- A) H_2
B) Cl_2
C) HCl
D) O_2
- 22) Which of the following carbocations is the least stable?
- A) Methyl
B) Primary
C) Tertiary
D) Secondary
- 23) Which of the following statements is TRUE for an E1 reaction?
- A) The E1 reaction requires a strong base to take place
B) Primary and secondary alkyl halides are a good substrate for the E1 reaction.
C) The E1 reaction occurs during the solvolysis of tertiary alkyl halides
D) The rate of the E1 vs. SN1 reaction increases at lower temperature.
- 24) What is the correct name for this molecule?



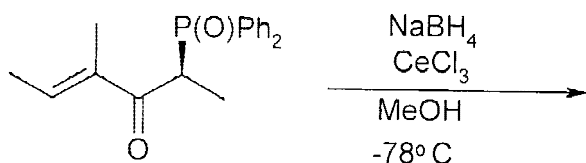
- A) (2R, 3R)-2-bromo-3-chlorobutane
B) (2S, 3R)-2-bromo-3-chlorobutane
C) (2S,3S)-2-bromo-3-chlorobutane
D) (2R, 3S)-2-bromo-3-chlorobutane

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33) Which of the following is not used the reference material in DTA?

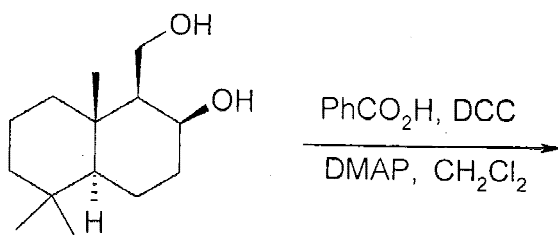
- | | |
|----------------------------|-------------------|
| A) Al_2O_3 | B) SiC_2 |
| C) SrCO_3 | D) SnO_2 |

34) The major product of the following reaction is _____.



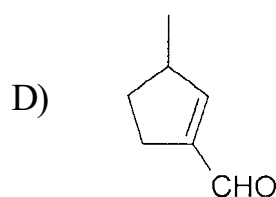
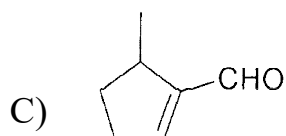
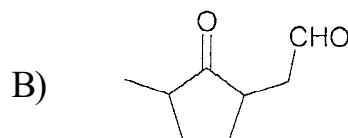
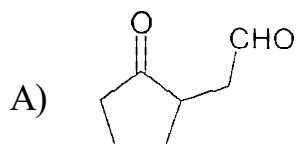
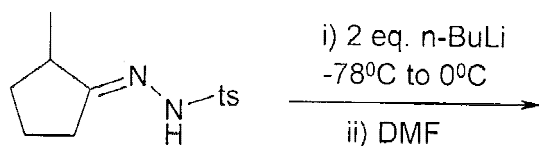
- | | |
|------------|------------|
| <p>A) </p> | <p>B) </p> |
| <p>C) </p> | <p>D) </p> |

35) Choose the correct product of the reaction given below.

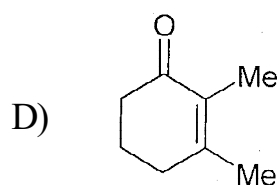
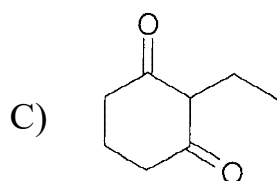
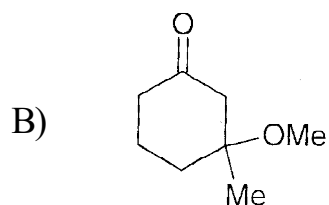
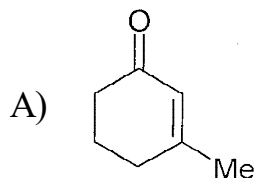
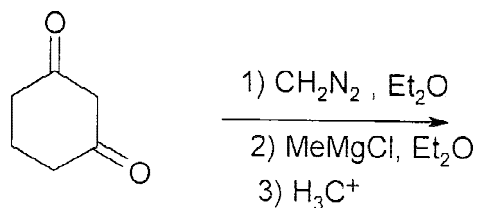


- | | |
|------------|------------|
| <p>A) </p> | <p>B) </p> |
| <p>C) </p> | <p>D) </p> |

39) Identify the major product formed in the following reaction:



40) The major product formed in the following reaction sequence is,



41) Four sp^3 hybrid orbitals adopt what kind of geometry?

A) Octahedral

B) Tetrahedral

C) Trigonal

D) Triangular

Rough Work

