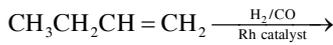


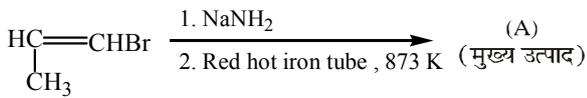
HYDROCARBON

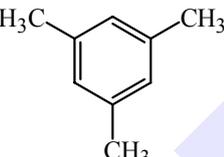
1. निम्नलिखित अभिक्रिया का मुख्य उत्पाद है :



- (1) $\text{CH}_3\text{CH}_2\text{CH}=\text{CH}-\text{CHO}$
- (2) $\text{CH}_3\text{CH}_2\text{C}(\text{CHO})=\text{CH}_2$
- (3) $\text{CH}_3\text{CH}_2\text{CH}_2\text{CH}_2\text{CHO}$
- (4) $\text{CH}_3\text{CH}_2\text{CH}_2\text{CHO}$

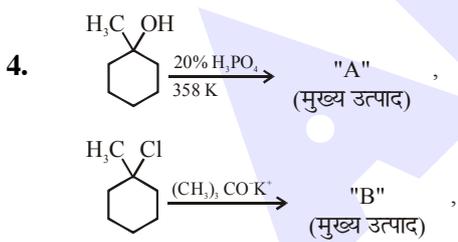
2. दी गयी अभिक्रिया के लिए 'A' क्या है ?



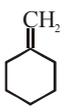
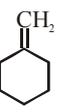
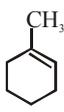
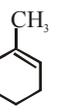
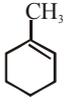
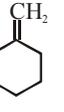
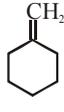
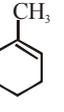
- (1) $\text{CH}_3\text{CH}_2\text{CH}_2\text{NH}_2$
- (2) $\text{CH}(\text{CH}_3)=\text{CH}-\text{NH}_2$
- (3) 
- (4) 

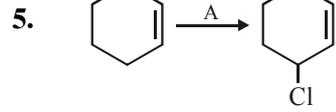
3. निम्नलिखित में से कौन सा लिंडलर उत्प्रेरक है ?

- (1) जिंक क्लोराइड तथा HCl
- (2) KMnO_4 का ठंडा तनु विलयन
- (3) सोडियम तथा द्रव NH_3
- (4) आंशिक रूप से असक्रिय किया पैलेडियम चारकोल



उपरोक्त अभिक्रियाओं में निर्मित उत्पाद "A" तथा "B" है :

- (1) A-  B- 
- (2) A-  B- 
- (3) A-  B- 
- (4) A-  B- 



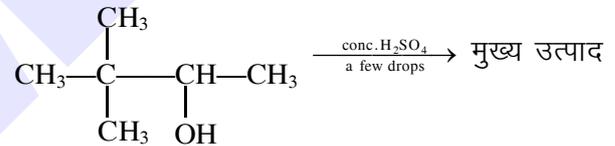
अभिक्रिया के लिए अभिकर्मक(कों) 'A' तथा स्थिति को पहचानिए :

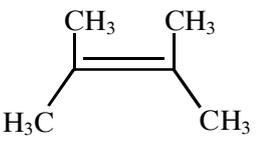
- (1) A = HCl ; निर्जलीय AlCl_3
- (2) A = HCl ; ZnCl_2
- (3) A = Cl_2 ; UV प्रकाश
- (4) A = Cl_2 ; अंधकार, निर्जलीय AlCl_3

6. एक असंतप्त हाइड्रोकार्बन X, ओजोनी अपघटन पर A देता है। यौगिक A को अमोनियाकृत सिल्वर नाइट्रेट के साथ गर्म करने परीक्षण नली की सतह पर एक चमकदार सिल्वर दर्पण बन जाता है। असंतप्त हाइड्रोकार्बन X है :

- (1) $\text{CH}_3-\text{C}(\text{CH}_3)=\text{C}(\text{CH}_3)-\text{CH}_3$
- (2) $\text{CH}_3-\text{C}(\text{CH}_3)=\text{CH}_2$
- (3) $\text{HC}\equiv\text{C}-\text{CH}_2-\text{CH}_3$
- (4) $\text{CH}_3-\text{C}\equiv\text{C}-\text{CH}_3$

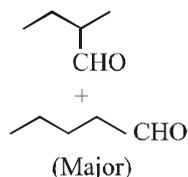
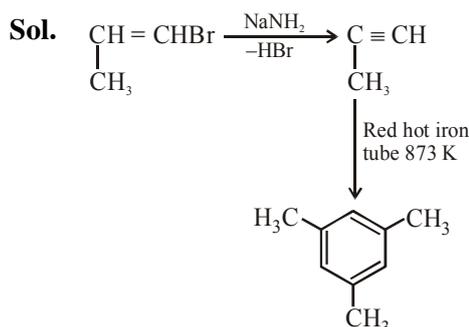
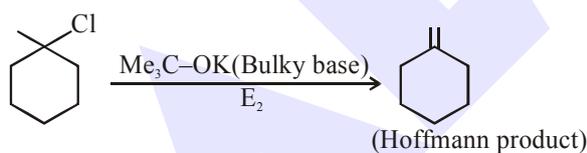
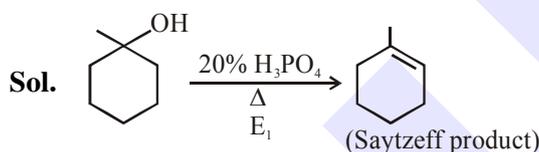
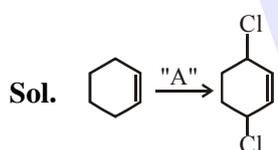
7. निम्नलिखित अभिक्रिया का मुख्य उत्पाद है:



- (1) $\text{CH}_3-\text{C}(\text{CH}_3)=\text{CH}-\text{CH}_2\text{CH}_3$
- (2) 
- (3) $\text{CH}_3-\text{C}(\text{CH}_3)=\text{CH}-\text{CH}_3$
- (4) $\text{CH}_3-\text{C}(\text{CH}_3)=\text{CH}_2$

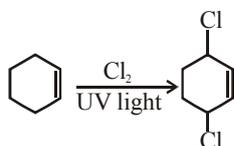
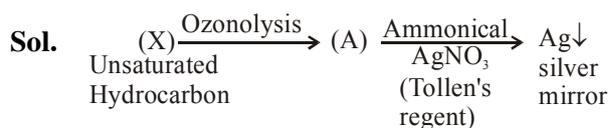
8. निम्न में से कौन सा अभिकर्मक युग्म क्रियात्मक गुप के अपचायक के रूप में कार्य नहीं करेगा ?

- (1) Pt-C/ H_2
- (2) Na/ H_2
- (3) Pd-C/ H_2
- (4) Zn/ H_2O

SOLUTION**1. Official Ans. by NTA (3)****Sol.** OXO PROCESS (Hydroformylation) :**2. Official Ans. by NTA (4)****3. Official Ans. by NTA (4)****Sol.** Partially deactivated palladised charcoal ($\text{H}_2/\text{pd}/\text{CaCO}_3$) is lindlar catalyst.**4. Official Ans. by NTA (3)****5. Official Ans. by NTA (3)**

For substitution at allylic position in the given compound, the reagent used is Cl_2/uv light.

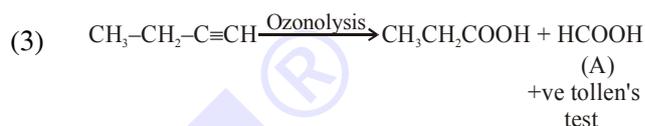
The reaction is free radical halogenation.

**6. Official Ans. by NTA (3)**

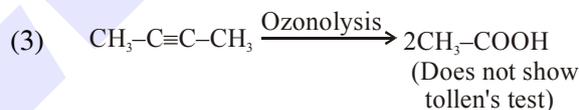
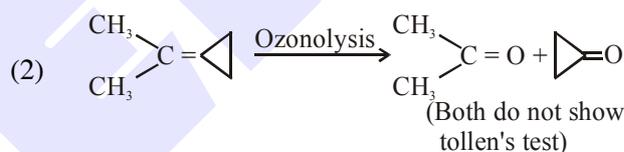
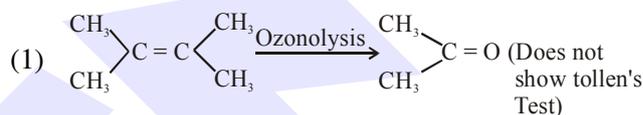
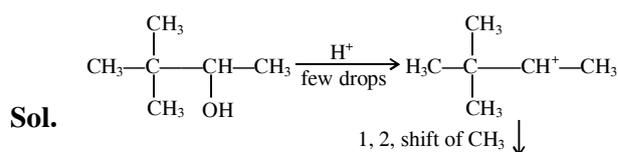
As (A) compound given positive tollen's test hence it may consist $-\text{CHO}$ (aldehyde group).

or it can be HCOOH

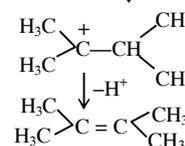
So for the given option :



and for other compounds (options):

**7. Official Ans. by NTA (2)**

1, 2, shift of CH_3 ↓

**8. Official Ans. by NTA (2)****Sol.** Solution NaH_2 is not reducing agent