

Exam. Code : 103203

Subject Code : 1348

B.A./B.Sc. 3rd Semester

CHEMISTRY

(Organic Chemistry—II)

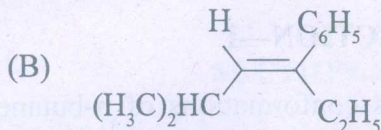
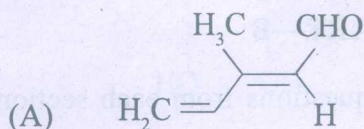
Time Allowed—3 Hours]

[Maximum Marks—35

PART—A

Note :— ALL questions are compulsory. Each question carries 1 mark.

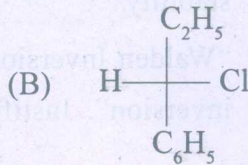
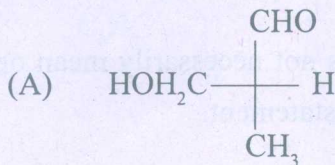
1. Assign E/Z configurations to the following :



2. Draw the structure of diene :

(2Z, 4Z)-1-chloro-2, 4-heptadiene.

3. Assign R/S configurations to the following :



4. Acid catalysed dehydration of tert-butyl alcohol occurs faster than n-butyl alcohol, why ?
 5. Phenol is insoluble in aqueous sodium carbonate solution while 2, 4, 6-trinitrophenol is soluble, why ?
 6. Alkylation of 2, 6-di-tert-butyl phenol yields C-alkylated as major product over O-alkylation, why ?
 7. Aromatic aldehydes undergo nucleophilic addition reactions less readily than aliphatic aldehydes, explain.
 8. Why CN^- is required for benzoin condensation ?
- $8 \times 1 = 8$.

PART—B

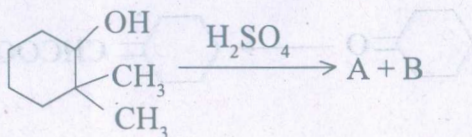
Note :— Attempt **TWO** questions from each section. All questions carry equal marks.

SECTION—I

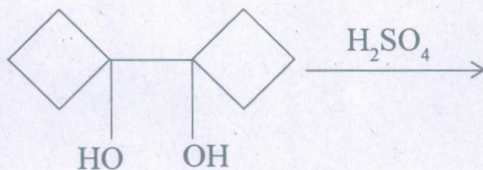
9. Write down various conformations of n-butane and mark them on energy profile diagram. 4½
10. Draw Newman projection formula of chair and boat form of cyclohexane and comment upon their relative stability. 4½
11. “Walden Inversion does not necessarily mean optical inversion”. Justify the statement. 4½

SECTION—II

12. Identify the products in the following reaction and provide suitable mechanism : 4½



13. Predict the product in the following reaction and provide a suitable mechanism for it : 4½

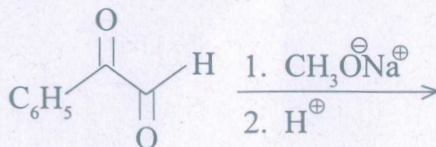


14. How will you convert anisole to p-anisaldehyde ?

4½

SECTION—III

15. Predict the product in the following reaction and write a suitable mechanism : 4½



16. How will you convert propiophenone to n-propyl benzene ? Give a suitable mechanism. $4\frac{1}{2}$
17. Predict the reagents required for the following transformation along with a suitable mechanism : $4\frac{1}{2}$

