

EASTERN UNIVERSITY, SRI LANKA
THIRD EXAMINATION IN SCIENCE (FIRST SEMESTER) 2001/20
CH 301 CHEMISTRY OF NATURAL PRODUCTS (April 2002)

TIME: 01 HOUR

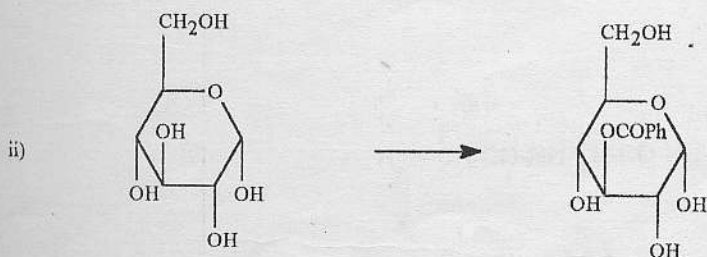
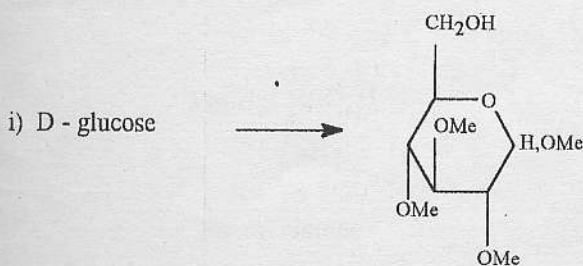
ANSWER ALL QUESTIONS.



1) Answer **all** three parts (a), (b) and (c)

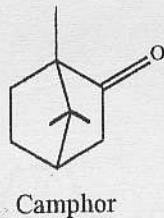
a) **R** is a reducing disaccharide which on hydrolysis with dilute mineral acids gives two molecules of glucose, when **R** is treated with excess dimethyl sulphate and aqueous sodium hydroxide and the resulting product hydrolysed 2,3,4,6 - tetra - *O* - methyl glucose and 2,3,6 - tri - *O* - methyl glucose were obtained as products. Deduce possible structure(s) for the compound **R**.

b) By means of equations show how **two** of the following conversions may be effected. Give essential experimental conditions.



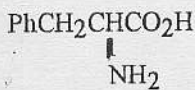


c) Outline one method to synthesis Camphor.

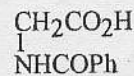


2) Answer all three parts (a), (b), and (c)

a) By means of equation show how Phenyl alanine could be synthesised starting from benzaldehyde and benzoyl glycine. Give essential experimental conditions and mechanism involved in it.

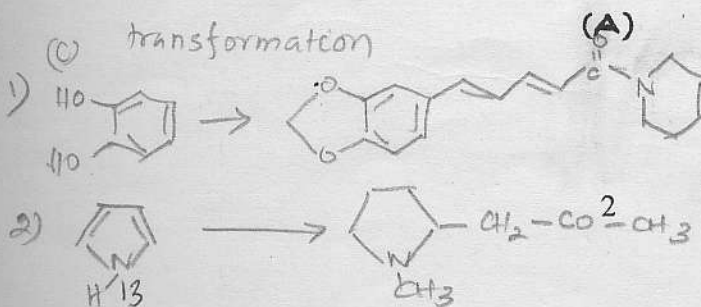
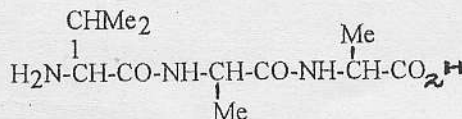


Phenyl alanine



Benzoyl glycine

b) Describe one method each for the determination of N - terminal and C - terminal amino acids in the following tripeptide A.



c) Indicate by means of equations, how the following transformations may be effected. Give essential experimental conditions.

