Eastern University, Sri Lanka

Third Year Special Repeat Examination in Science

2008/2009 (February2010)

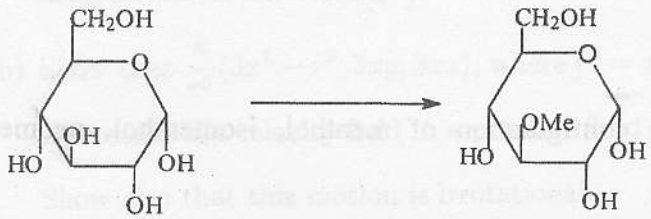
CH 301 Chemistry of Natural Products

Time Allowed: **ONE HOUR**

Answer all questions

1. (a). By means of equations show how the following transformations may be effected. Give essential experimental

(1)



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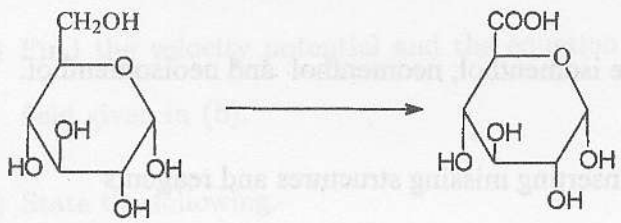

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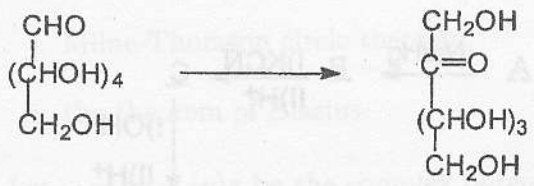

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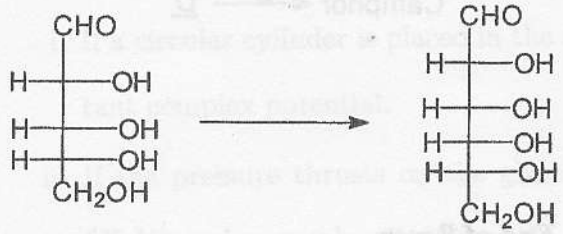


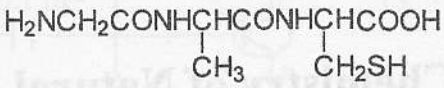
(b). Draw the structures of the following disaccharides and indicate the type(s) of the linkage in it.

(i) Sucrose

(ii) Lactose

(iii) Maltose

2 (a). Show how the following tri peptide can be synthesized starting with individual amino acids.



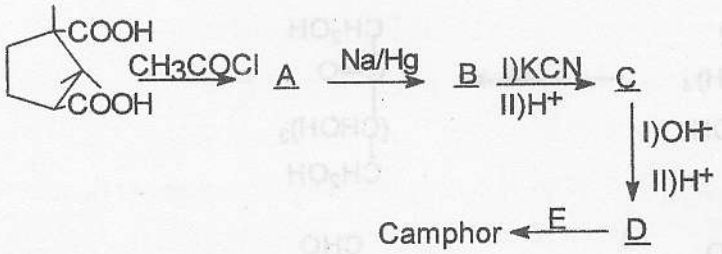
(b). Explain what is meant by "iso-electric point" of an amino acid? The pK1 and pK2 values of glycine are 2.4 and 9.6 respectively. Calculate the isoelectric point of that glycine.

(c). Give the isomeric natures of Citral and discuss a method to synthesis one of its isomers.

(d). Write the cyclohexane configuration of menthol, isomenthol, neomenthol and neoisomenthol.

(e). Discuss the stability of the isomenthol, neomenthol and neoisomenthol.

(f). Complete the scheme by inserting missing structures and reagents



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