



National Open University Of Nigeria
Plot 91, Cadastral Zone, Nnamdi Azikiwe Expressway, Jabi - Abuja
Faculty of Science
October/November 2016 Examination

COURSE CODE: CHM 315

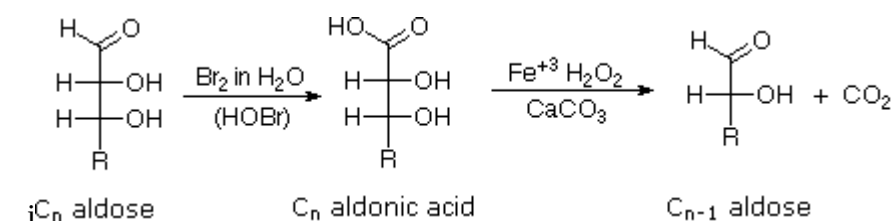
COURSE TITLE: Carbohydrate Chemistry

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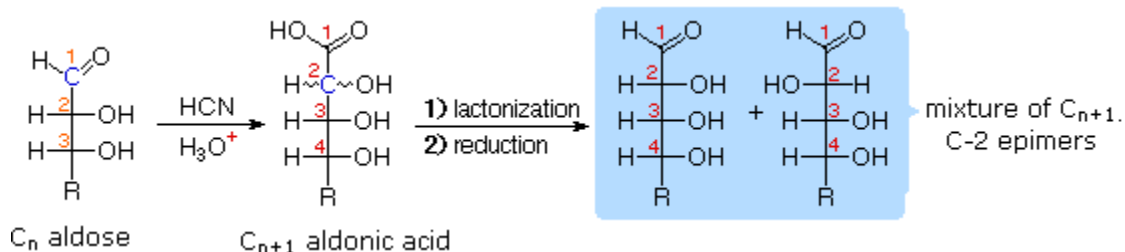
TIME: 2 HRS

Instructions: Answer 4 questions only

1. a. What are Disaccharides? (1½mark) .Mention the disaccharide commonly found in germinated cereal grains (1 mark)
 - a. Write briefly on Sucrose (*marks will be given for well represented structures*) (6marks)
 - c. In tabular forms give 3 differences and similarities between Trehalose and Maltose (9marks)
2. a. Differentiate between amylose and amylopectin (*Marks will be awarded for well represented structures*) (11marks)
 - b Write briefly on
 - i Dextran
 - ii Glycogen (*structures will not be necessary*) (6½marks)
- 3a. Write briefly on osazones (12 marks) ***Marks will be given for correctly presented equation***
 - b. Using Chemical structures only show the relationship between the osazones of glucose and mannose (5½marks)
- 4 .Write short notes on the following giving the structure of a named example in each case:
 - a. Ketose (6marks) b.Non -reducing sugars(6marks) c. Sugar Alcohols (5½marks)
- 5 a Define the term Heteropolysaccharides (1mark)
 - b. Write briefly on the following (*Marks will be awarded for well represented structures*)
 - i. Inulin. (6marks)
 - ii Chitin (4½ marks)
 - iii. Alginic acid/alginate (6marks)



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- Write briefly on the processes represented in the above equations (i) and (ii) (6marks)
- With the aid of chemical structures **only** show the differences in the following
 - D-gluconic acid and D-glucuronic acid (3 marks)
 - α -D-glucose and β -D-glucose (3marks)
 - Ribose and Deoxyribose (3marks)
 - Mention three functions of carbohydrates (2½marks)