



DEDAN KIMATHI UNIVERSITY OF TECHNOLOGY
UNIVERSITY EXAMINATIONS 2014/2015
FOURTH YEAR FIRST SEMESTER EXAMINATION FOR THE DEGREE IN
BACHELOR OF SCIENCE IN FOOD SCIENCE AND TECHNOLOGY

FST 2401: SUGAR AND CONFECTIONERY TECHNOLOGY

DATE: 13TH AUGUST /2014

TIME: 11.00AM-1.00PM

INSTRUCTIONS: Answer all questions in section A and any other two in section B

SECTION A - [30 MARKS]

1. Briefly describe the properties of sucrose under the following;
 - a) The biosynthesis of sucrose in plants
(4mks)
 - b) Physical and chemical properties of sucrose (6mks)
2. Explain the imbibition process applied in raw sugar manufacture;
 - a) Types of imbibition (3mks)
 - b) Advantages of imbibition (5mks)
3. Describe briefly the manufacture of the following confectionery products;
 - a) Manufacture of chocolate confectionery (8mks)
 - b) Quality aspects of confectionery products (4mks)

SECTION B – [40 MARKS]

4. Discuss the sugar industry in Kenya under the following;
 - a) The effect harvesting time and how to determine the critical harvesting period (4mks)
 - b) The challenges facing the sugar industry in Kenya (8 mks)
 - c) The possible solutions to the challenges discussed above (8mks)
5. Discuss the production of sugar from sugar beets in Kenya;
 - a) Agronomic requirements for sugar beet growing (4mks)
 - b) The steps involved in sugar production from sugar beets (10mks)
 - c) The quality parameters of sugar beets used in sugar production (6mks)
6. Discuss the following steps involved in sugar refining;
 - a) Affination process (8mks)
 - b) Clarification process (8mks)
 - c) Carbonation process (4mks)