

KIBABII UNIVERSITY COLLEGE

**UNIVERSITY EXAMINATIONS
2013/2014 ACADEMIC YEAR**

YEAR 1 SEMESTER 2 EXAMINATIONS

FOR THE DEGREE OF

MASTER OF SCIENCE (INFORMATION TECHNOLOGY)

COURSE CODE: MIT 827

COURSE TITLE: Green ICT

INSTRUCTIONS

Answer question one and any other two questions only
All questions carry 20 marks each

1. Briefly explain what is meant by green ICT (6 marks)
 - (b) Discuss the factors that have made implementation of green ICT very difficult for most nations where it has been recognized to be important (14 marks)
2. (a) A shortage of data centre space and need for increased computer systems has resulted in increasing density of Data Centres equipment and consumption of large amounts of energy, both by the ICT equipment and the air conditioning needed to cool it. Suggest any five steps that can be taken by a company to minimise energy and materials consumption in such centres (5 marks)
 - (b) Discuss how ICT systems can reduce energy and materials use by improving the efficiency of business systems (15 marks)
3. Discuss the concepts of Energy star with reference to computers (20 marks)
4. Computers and telecommunications equipment contributes about 2% to greenhouse gas emissions. As an the ICT Manager of your organisation identify what they are and explain how you would make:-

- (a) Client equipment more efficient in terms of carbon footprint. (8 marks)
 - (b) Data centres more efficient in terms of carbon footprint (12 marks)
5. (a) What is meant by carbon footprint (4 marks)
- (b) Identify and explain the stages that you would consider in the calculation greenhouse gas emissions attributable to an ICT product or service over its life cycle (16 marks)