



KENYATTA UNIVERSITY

UNIVERSITY EXAMINATIONS 2010/2011

FIRST SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF
SCIENCE (COMPUTER ENGINEERING)

SCE 201: SOFTWARE DEVELOPMENT

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DATE: MONDAY 22ND NOVEMBER 2010 TIME: 8.00 A.M. - 10.00 A.M.

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INSTRUCTIONS: Answer **Question 1 (ONE)** and any **Two questions**.

Question 1

- a) What do you understand by the term “Information System”? (3 marks)
- b) What is your appreciation of an IS development methodology? (3 marks)
- c) Explain any three negative effects of Information systems. (3 marks)
- d) Analyze SIX major organizational factors are to be considered when planning new information systems? (6 marks)
- e) Discuss **FIVE** management challenges and opportunities in business process change requirements. (5 marks)
- f) Analyze three main reasons why you would develop models in IS development. (3 marks)
- g) How is data modeling related to software development? (2 marks)
- h) Consider an IS failure or success you have had in Kenya or elsewhere. What part of the case can you attribute to technology, human or organizational aspects? (5 marks)

Question 2

Total 15 marks

- a) Assume you are creating a bank information management system. Identify 5 classes that would be relevant, design them showing at least 5 properties and 4 methods per class. (10 marks)
- b) Draw a class diagram for the above example. (5 marks)

Question 3**Total 15 marks**

- a) Briefly evaluate the significance of these three aspects of software development.
- i) Software testing
 - ii) Data migration
 - iii) Handing (9 marks)
- b) Discuss the role of various stake holders in an IS development project. (6 marks)

Question 4**Total 15 marks**

- a) Discuss the various stages of Traditional System Development Life Cycle (SDLC). (6 marks)
- b) For each of the SDLC stages, identify the main end deliverables. (3 marks)
- c) Software development lifecycles are created with specific objectives. Discuss six such objectives. (6 marks)

Question 5**Total 15 marks**

- a) A logical data model defines the complete set of documentation describing the data structure of a system. Assume you are creating an information system of an outpatient clinic. Draw a logical data model showing the flow of data from the time a patient is admitted to the time the hospital bill is cleared. (6 marks)
- b) An entity relationship diagram is one of the techniques for modeling data and acts as a basis for designing a database. Assume that you are creating a banking information system; identify the entities and draw an entity relationship diagram. (9 marks)