



*(University of Choice)*

**MASINDE MULIRO UNIVERSITY OF  
SCIENCE AND TECHNOLOGY**

**(MMUST)**

**MAIN CAMPUS**

**UNIVERSITY EXAMINATIONS**

**2022/2023 ACADEMIC YEAR SEMESTER 2**

**FOR THE DIPLOMA**

**IN**

**INFORMATION TECHNOLOGY**

**COURSE CODE: DIT 074**

**COURSE TITLE: INTRODUCTION TO SOFTWARE ENGINEERING**

**DATE: 12/04/2023**

**TIME: 2:00-3:30pm**

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**INSTRUCTIONS TO CANDIDATES**

Answer **QUESTION ONE** and **ANY OTHER TWO** questions.

**TIME: 2 Hours**

MMUST observes **ZERO** tolerance to examination cheating

This Paper Consists of 3 Printed Pages. Please Turn Over. ►

### QUESTION ONE [24MKS]

- a) Define the following terms as used in software engineering: [3marks]
- i. Software quality
  - ii. Model
  - iii. Project management
- b) What are essential attributes of a good software? Briefly describe them. [3marks]
- c) What is feasibility study? What are the contents we should contain in the feasibility report? [5 marks]
- d) What is the difference between SRS document and design document? What are the contents we should contain in the SRS document and design document. [4 marks]
- e) Give three benefits of verification and validation in software development and tell about the techniques of verification and validation in the process of software development. [7 marks]
- f) What is the Origin of changes that are requested for software? [2marks]

### QUESTION TWO [18 MKS]

- a) Discuss the reasons why substantial software systems often take longer to implement than planned and do not perform as well as expected. [10 marks]
- b) List the four generic activities in a software process and give a brief description for each of them [8 marks]

### QUESTION THREE [18 MKS]

- a) If you were in charge of a large team implementing such a system, how would you ensure that the product was both reliable and finished on time? [10 marks]
- b) What is a software process model? Name three generic software process models and explain an advantage and a disadvantage for each of them. [8 marks]

### QUESTION FOUR [18 MKS]

- a) What are the purposes of Data Flow diagrams, Entity-Relationship diagrams? Give an example diagram of each. [10 marks]
- b) What is user acceptance testing? Explain different testings in user acceptance testing. Why is it necessary? [8 marks]

**QUESTION FIVE [18 MKS]**

- a) State and explain any four types of maintenance done in software engineering [8marks]
- b) State three factors affecting maintenance cost of a software [3marks]
- c) State three factors affecting software pricing [3marks]
- d) For an effective management accurate estimation of various measures is a must. With correct estimation managers can manage and control the project more efficiently and effectively. State and explain any four project estimation that should be considered. [4marks]

