



(Knowledge for Development)

KIBABII UNIVERSITY

(KIBU)

**UNIVERSITY EXAMINATIONS
2020 /2021 ACADEMIC YEAR**

**END OF SEMESTER EXAMINATIONS
YEAR TWO SEMESTER TWO EXAMINATIONS**

**FOR THE DIPLOMA
INFORMATION TECHNOLOGY**

COURSE CODE : DIT 074

**COURSE TITLE : INTRODUCTION TO
SOFTWARE ENGINEERING**

DATE: 06/10/2021 TIME: 2.00 P.M. - 4.00 P.M.

INSTRUCTIONS TO CANDIDATES

ANSWER QUESTIONS ONE AND ANY OTHER TWO.

QUESTION ONE (COMPULSORY) [24 MARKS]

1. Define the following terms and concepts as used in the study of software engineering.
 - a) Software engineering [2 marks]
 - b) Software Project [2 marks]
2. What is SDLC? [2 marks]
3. What differentiates between the following concepts: **Software Engineering** and **Computer Science**? [4 marks]
4. Discuss **FOUR** quality attributes of software product? [8 marks]
5. Why is Software Engineering important in today's world of technology? [6 marks]

QUESTION TWO [18 MARKS]

1. What is the purpose of SDLC in Software Engineering? [2 marks]
2. Discuss the various phases of SDLC required by a Software Engineer during software development. [12 marks]
3. With examples, differentiate between functional vs non-functional requirements. [4 marks]

QUESTION THREE [18 MARKS]

1. ABNO Softwares International is one of the leading software companies in Kenya whose task is to develop and delivery software products. Its developers have settled on using Waterfall model in their software production. With a well labelled diagram, explain the Waterfall model process. State Four advantages why you think they settled on this model. [10 marks]
2. Explain the difference between black-box and white-box testing. [4 marks]
3. Practical requirements elicitation is a segment that is vital to the accomplishment of any software project. List **Four** most effective requirements elicitation techniques. [4 marks]

QUESTION FOUR [18 MARKS]

1. What is meant by the following terms as used in Software Engineering?
 - a) Software testing [1 mark]
 - b) Verification [1 mark]
 - c) Validation [1 mark]

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- d) Software Maintenance [1 mark]
2. Testing in Software Engineering may be defined at various levels of SDLC. The testing process runs parallel to software development. Discuss in detail **FOUR** testing levels in Software Engineering. [8 marks]
3. Discuss various types of software maintenance strategies. [6marks]

QUESTION FIVE [18 MARKS]

1. What is meant by the following terms and concepts: **Software project management, Deliverable, milestone** as used in the study of Software Engineering? [6 marks]
2. Discuss various management activities used in Software Project Management. [6 marks]
3. What are the characteristics of an effective SRS? [6 marks]