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*(Knowledge for Development)*

# **KIBABII UNIVERSITY**

**(KIBU)**

**UNIVERSITY EXAMINATIONS**

**2019/2020 ACADEMIC YEAR**

**END OF SEMESTER EXAMINATIONS**

**SECOND YEAR SECOND SEMESTER EXAMINATIONS**

**FOR THE DIPLOMA IN**

**(INFORMATION TECHNOLOGY)**

**COURSE CODE : DIT 074**

**COURSE TITLE : INTRODUCTION TO SOFTWARE  
ENGINEERING**

**DATE: 12/11/2020**

**TIME: 2.00 P.M. – 5.00 P.M.**

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**INSTRUCTIONS TO CANDIDATE**

**ANSWER QUESTION ONE AND ANY OTHER TWO**

**QUESTION ONE (COMPULSORY)****[24 MARKS]**

- a) Explain the following terms in relation to software development:
- i. Software safety [2 Marks]
  - ii. Software [2 Marks]
- b) Distinguish between **systems** engineering and **software** engineering. [4Marks]
- c) Outline Six attributes of good software. [6 Marks]
- d) Explain the following concepts as applied to software engineering:
- i. Software quality assurance [2 Marks]
  - ii. Software quality control [2 Marks]
- e) Explain the following types of software requirements.
- i. User requirements [3 Marks]
  - ii. System requirements [3Marks]

**QUESTION TWO****[18 MARKS]**

- a) Discuss four main problems associated with software project management. [8 Marks]
- b) Discuss five types of software documentation. [10 Marks]

**QUESTION THREE****[18 MARKS]**

- a)
  - i. Explain software prototyping in software development [4 Marks]
  - ii. Outline four benefits of prototyping. [4 Marks]
- b) Explain three activities included in requirements analysis. [6 Marks]
- c) Discuss two possible problems caused by software engineers and developers during requirements analysis. [4Marks]

**QUESTION FOUR****[ 18 MARKS]**

- a) Describe the White Box testing in relation to software development. [4 Marks]
- b) In order to manage a successful software project, we must understand what can go wrong so that the problem can be avoided. **Explain three signs that indicate an Information Systems Project is in Jeopardy.** [6 Marks]
- c) Explain what project management is in software development. [2 Marks]
- d). State and Explain Three reasons why software projects need to be managed [6 Marks]

**QUESTION FIVE**

**[ 18 MARKS]**

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- a. Distinguish between functional and non-functional requirements. [4Marks]
- b. Describe four software maintenance types. [12 Marks]
- c. What is software evolution? [2Marks]