



(Knowledge for Development)

**KIBABII UNIVERSITY  
(KIBU)**

**MAIN CAMPUS**

**UNIVERSITY EXAMINATIONS**

**2021/2022 ACADEMIC YEAR**

**SPECIAL/SUPPLEMENTARY EXAMINATION**

**SECOND YEAR FIRST SEMESTER EXAMINATION**

**FOR THE DEGREE OF BACHELORS OF SCIENCE IN  
(INFORMATION TECHNOLOGY)**

**COURSE CODE: BIT 215**

**COURSE TITLE: SYSTEMS ANALYSIS AND DESIGN**

**DATE: 15/07/2022 TIME: 11.00 A.M. – 1.00 P.M.  
2HRS**

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**INSTRUCTIONS TO CANDIDATES:  
ANSWER QUESTIONS ONE AND ANY OTHER TWO.**

Paper Consists of 2 Printed Pages. Please Turn Over



### QUESTION ONE (30 MARKS) [COMPULSORY]

- a. Describe any three different classes of information system applications. [6 Marks]
- b. Differentiate between the system life cycle and a system development methodology. [2 Marks]
- c. Describe three causes of failed information systems and technology projects. [6 Marks]
- d. Time-value-of-money concept is an essential consideration when accessing economic feasibility. Discuss. [2 Marks]
- e. Distinguish between system analysis and system design. [2 Marks]
- f. Compare the roles of systems analyst and database administrator as they relate to databases. [2 Marks]
- g. Differentiate between functional and non-functional requirements. [2 Marks]
- h. Explain the difference between logical and physical system models. [2 Marks]
- i. Explain any two benefits of prototyping. [4 Marks]
- j. Identify any two reasons of testing a newly developed system. [2 Marks]

### QUESTION TWO (20 MARKS)

- a. Identify the five phases of systems analysis [5 Marks]
- b. Identify two different types of *stakeholders* who use or develop information systems, and explain the role of each. [6 Marks]
- c. Describe three technologies that provide system designers and builders with a perspective of an information system. [6 Marks]
- d. The increasing use of graphical user interfaces (GUI) has complicated the design process for system designers. Discuss. [3 Marks]

### QUESTION THREE (20 MARKS)

- a. Explain any four types of feasibility tests. [8 Marks]
- b. "Many new systems analysts always effectively analyse problems." Do you agree or disagree with the statement? Justify your answer. [3 Marks]
- c. Describe two benefits of use-case modelling. [4 Marks]
- d. Describe the role of information systems architecture in systems development. [2 Marks]
- e. Problems, opportunities, and directives are the triggers for systems development projects. Discuss. [3 Marks]

### QUESTION FOUR (20 MARKS)

- a. Describe any five underlying principles for system development. [10 Marks]
- b. Describe any two types of system conversions or changeover. [4 Marks]
- c. Identify the advantages and disadvantages of the types of system conversions described in (b) above. [6 Marks]

### QUESTION FIVE (20 MARKS)

- a. Good interpersonal communication skills are essentials for system analysts. Discuss. [2 Marks]
- b. Explain why documentation is important throughout the development process. [2 Marks]
- c. Describe the basic steps for designing output. [8 Marks]
- d. Explain the four main categories of competencies that a project manager should have. [8 Marks]