



ZIMBABWE EZEKIEL GUTI UNIVERSITY
FACULTY OF HEALTH, SCIENCE AND TECHNOLOGY

DEPARTMENT OF DIGITAL TECHNOLOGY

EXAMINATION PAPER

COURSE CODE : MIS 211
COURSE TITLE : Systems Analysis and Design
SPECIAL REQUIREMENTS : None
DURATION : 3 Hours
LEVEL : 2.1
DATE : **06 OCT 2022**

INSTRUCTIONS TO CANDIDATES:

1. This paper consists of 2 sections
2. Answer **ALL** Questions in SECTION A and **ANY THREE** Questions from SECTION B in booklet provided.
3. Start each Question on a new page

There are 3 printed pages for this question paper

SECTION A

Answer **ALL** questions from this section

QUESTION 1

- a) Using a relevant example of your choice clearly explain the differences between a system **flowchart** and **pseudo-code** [10 marks]
- b) Discuss the reasons for project proposals. In your discussion include the key elements of a project proposal document. [10 marks]

QUESTION 2

- a) What is feasibility study? [4 marks]
- b) List any 6 elements of a feasibility study report [6 marks]
- c) There are several types of feasibility studies and these include **economic, technical, operational, social** and **schedule** feasibility. Give a brief explanation on each of these types. [10 marks]

SECTION B

Choose any **THREE** questions from this section each question carries 20 marks.

QUESTION 3

A boss wants to give all her employees a nice bonus. She tells you:

"I need a report listing every employee and the bonus plan to give him or her. Everybody gets at least \$100. All the employees in Department 2 get \$200, but if they have more than 5 dependents, they should get \$500, and the employees in department 3 should all get \$500."

Construct a decision table and a decision tree for the above scenario. [2 x 10 marks]

QUESTION 4

Draw a use case diagram that models the following small system. Refine your use case to show at least one **<extends>** and at least one **<includes>** relationship.

- Bob is an enthusiastic gardener who earns money by doing gardening work for his neighbours
- Bob buys the materials (fertilizer, mulch, etc.) that he needs, and charges his customers for both labour and materials

- some customers make appointments when they want work done and pay when Bob completes the work
- some customers set up a schedule (usually weekly) for regular work and pay when Bob sends them a monthly invoice for work done during the month [20 marks]

QUESTION 5

With the aid of relevant example, provide a clear distinction between the following types of systems:

- a) Physical and Abstract Systems
- b) Open and Closed Systems
- c) Adaptive and Non Adaptive System
- d) Permanent and Temporary System
- e) Natural and Manufactured System

[5 x 4 marks]

QUESTION 6

A class may be involved in one or more relationships with other classes. Clearly explain the following relationship types:

- a) Inheritance (or Generalization)
- b) Simple Association
- c) Aggregation
- d) Composition
- e) Dependency

[5 x 4 marks]

*** Wish you all the best ***

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