



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 : May 2021 ~~06~~ JUL 2022

06 JUL 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

Using examples and or diagrams explain the four changeover strategies in detail [20 marks]

QUESTION 2

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

SECTION B

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

QUESTION 3

- “Information systems don’t die but rather they become obsolete”, explain the validity of this statement. [5 marks]
- Explain using examples why systems have to be maintained [15 marks]

QUESTION 4

- Using any programming language of your choice, convert the following pseudo-code into a program

```
Begin  
Year: integer  
Enter year  
If year mod 4 = 0  
Output "leap year"  
Else  
Output "it is not a leap year"  
End program
```

[10 marks]

- b) Draw a flow chart diagram for a login system that takes as input username and password to determine whether the user has successfully logged in or invalid login credentials

[10 marks]

QUESTION 5

- a) **Use case diagrams** model the functionality of a system using actors, use cases, system boundary and communication links. Draw a simply use case diagram for a system of your choice. [6 marks]
- b) Use the diagram you have drawn above to briefly describe the **FOUR** main components of a **use case diagram**. [8 marks]
- c) Clearly distinguish between **<<include>>** and **<<extend>>** relationships as used in **use case diagrams** [4 marks]
- d) State an advantage and a limitation on the use of use case diagrams [2 marks]

QUESTION 6

A customer requests a cash withdrawal. One of the business rules for the ATM is that the ATM machine pays out the amount if the customer has sufficient funds in their account or if the customer has the credit granted.

Using the scenario above construct a decision table and a decision tree. [2 x 10 marks]

*** Wish you all the best ***

0/17 P.M