



**UNIVERSITY EXAMINATIONS**

**EXAMINATION FOR MAY-AUGUST 2018/2019 DIPLOMA IN COMPUTER  
SCIENCE/INFORMATION TECHNOLOGY/ DIPLOMA IN BUSINESS  
INFORMATION TECHNOLOGY**

**COURSE CODE: RCS025 COURSE UNIT: System Analysis and Design**

DATE: \_\_\_\_\_

TIME: 2 HOURS

**GENERAL INSTRUCTIONS:**

Students are NOT permitted to write on the examination paper during examination time.

This is a closed book examination. Text book/Reference books/notes are not permitted.

**SPECIAL INSTRUCTIONS:**

This examination paper consists Questions in Section A followed by section B.

Answer Question 1 and any Other Two questions.

QUESTIONS in ALL Sections should be answered in answer booklet(s).

- 1. PLEASE start the answer to EACH question on a NEW PAGE.**
- 2. Keep your phone(s) switched off at the front of the examination room.**
- 3. Keep ALL bags and caps at the front of the examination room and DO NOT refer to ANY unauthorized material before or during the course of the examination.**
- 4. ALWAYS show your working.**
- 5. Marks indicated in parenthesis i.e. ( ) will be awarded for clear and logical answers.**
- 6. Write your REGISTRATION No. clearly on the answer booklet(s).**
- 7. For the Questions, write the number of the question on the answer booklet(s) in the order you answered them.**
- 8. DO NOT use your PHONE as a CALCULATOR.**
- 9. YOU are ONLY ALLOWED to leave the exam room 30minutes to the end of the Exam.**
- 10. DO NOT write on the QUESTION PAPER. Use the back of your BOOKLET for any calculations or rough work.**

**Answer Question One (Compulsory) and any other Two questions**

**Section A (Compulsory)**

**Question One (30 Marks)**

- a) Define; **(10 Marks)**
- i) Organization
  - ii) Information System
  - iii) Decision Support System
  - iv) Cloud Computing
  - v) System Development Life Cycle
- b) List potentially positive impacts of automating operations in an organization **(6Marks)**
- c) Explain the four Rules of drawing a DFD. **(4Marks)**
- d) Discuss categories of Information Systems **(4 Marks)**
- e) Outline six (6) principles of a Successful System development. **(6 Marks)**

**SECTION B (OPTIONAL 2 OUT OF 4)**

**QUESTION 2 (20 MARKS)**

- a) Discuss the importance of system analysis and design in the development of a system. **(8 Marks)**
- b) Outline tasks two (2) tasks carried out by a System Analyst. **(2Marks)**
- c) Briefly describe six (6) Attributes of information produced by a developed System that is good for decision making **(6Marks)**
- d) Discuss platforms which are used for large-scale cloud computing **(4 marks)**

### QUESTION 3 (20 MARKS)

- a) State two advantages of interviews over questionnaires as a fact finding technique. **(2 Marks)**
- b) Outline Six (6) criteria that may be used to select a System Project. **(6 Marks)**
- c) What are the various areas where AI (Artificial Intelligence) can be used? **(6 Marks)**
- d) What are the causes of system maintenance? **(6 Marks)**

### QUESTION 4 (20 MARKS)

- e) Define:
  - I) Entity Relationship Data Model **(2 marks)**
  - II) Normalization **(2 marks)**
  - III) Data Flow Diagram **(2 marks)**
- f) Whenever new patients are seen for the first time, they complete a patient information form that asks their name, address, phone number, and insurance agent, all of which is stored in the patient information file. Patients can be signed up with only one agent. Each time a patient visits its doctor, an insurance claim is sent to the agent for payment. The claim must contain information about the visit, such as the date, purpose, and cost. It would be possible for a patient to submit two claims on the same day. Draw an ERD for the situation. **(14 marks)**

### QUESTION 5 (20 MARKS)

- a) Distinguish between Database and Database Management system (DBMS). **(4 Marks)**
- b) Briefly describe four(4) advantages of using a database as opposed to the conventional application based file system **(4 Marks)**
- c) Different levels of management need different form of information .Listing three levels of Management ,discuss the types of information required **(6 Marks)**
- d) Briefly explain the different classes of information system in an organization **(6 Marks)**

END

