



GARISSA UNIVERSITY

UNIVERSITY EXAMINATION **2017/2018** ACADEMIC YEAR **ONE** **SECOND** SEMESTER EXAMINATION

SCHOOL OF INFORMATION SCIENCE

FOR THE DIPLOMA OF INFORMATION TECHNOLOGY

COURSE CODE: DIT 026

COURSE TITLE: INFORMATION SYTEM ENGINEERING

EXAMINATION DURATION: 3 HOURS

DATE: 09/04/18

TIME: 09.00-12.00 PM

INSTRUCTION TO CANDIDATES

- The examination has **SIX (6)** questions
- Question **ONE (1)** is **COMPULSORY**
- Choose any other **THREE (3)** questions from the remaining **FIVE (5)** questions
- Use sketch diagrams to illustrate your answer whenever necessary
- Do not carry mobile phones or any other written materials in examination room
- Do not write on this paper

This paper consists of **THREE (3)** printed pages

please turn over



QUESTION ONE (COMPULSORY)

- (a) Explain the term information system **[2 Marks]**
- (b) An information system is essentially a group of components working together to capture and deliver information to users.
- i. What are these components **[3 Marks]**
- (c) Define the following terms as used during systems analysis project
- i. Prototyping **[2 Marks]**
- ii. fact-finding **[2 Marks]**
- (d) What is a system changeover? State any **FOUR** methods of system changeover and explain their application **[4 Marks]**
- (e) The waterfall model applied to system analysis and design project has a number of limitations or preferably, criticisms. Explain any **FOUR** **[4 Marks]**
- (f) Explain the characteristics of the following types of Information System
- i. MIS
- ii. DSS **[8 Marks]**

QUESTION TWO

- (a) Information is required both for strategic decision making and for operational purposes. Explain, with examples, how strategic information differs from operational information **[10 Marks]**
- (b) Clearly explain the term information systems security and list the main goals of IS security **[5 Marks]**

QUESTION THREE

- (a) Managing I.T. infrastructure poses both opportunities and challenges. Explain the different opportunities of managing I.T. infrastructure. **[7 Marks]**
- (b) Information systems are vulnerable to several threats. Explain the different common threats against contemporary Information systems. **[8 Marks]**



QUESTION FOUR

It is sometimes claimed that there are Three organizational levels; operational, management and strategic.

- iii. For EACH of these organizational levels, give a brief description of its position in the management hierarchy. **[5 Marks]**
- iv. Explain the Information System and the types of decision made at each level. **[10 Marks]**

QUESTION FIVE

- (a) Evaluate any three major causes of information systems failure. **[3 Marks]**
- (b) Identify and describe six ethical principles **[12 Marks]**

QUESTION SIX

- (a) Explain the key technological trends that heighten ethical concerns **[5 Marks]**
- (b) The system development life cycle, SDLC, is principally a seven stages process. Describe this cycle. **[10 Marks]**

