



GARISSA UNIVERSITY COLLEGE

(A Constituent College of Moi University)

**UNIVERSITY EXAMINATION 2016/2017 ACADEMIC YEAR ONE
SECOND SEMESTER EXAMINATION**

SUPPLEMENTARY/SPECIAL EXAMINATION

SCHOOL OF INFORMATION SCIENCE

FOR THE DIPLOMA IN INFORMATION TECHNOLOGY

COURSE CODE: DIT 009

COURSE TITLE: SYSTEM ANALYSIS AND DESIGN

EXAMINATION DURATION: 3 HOURS

DATE: 26/09/17

TIME: 02.00-05.00 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 TWO (2) printed pages

Supplementary / special exam_

1

please turn over

Good Luck – Exams Office



QUESTION ONE (COMPULSORY)

- (a) Define software engineering and explain four characteristics of a good software [5 marks]
- (b) Explain the roles of the following personnel's in system analysis and design [4 marks]
- i. System analyst
 - ii. User
- (c) Explain five benefits of modularization in software development [5 marks]
- (d) Distinguish between the following terms [6 marks]
- i. Program and software
 - ii. Cohesion and coupling
 - iii. Black box testing and white box testing
- (e) Explain five causes of project failure [5 marks]

QUESTION TWO

- (a) Explain the different stages of system development life cycle [7 marks]
- (b) Explain the following fact finding techniques and state two advantages and disadvantages of each
- i. Interviews [4 marks]
 - ii. Questionnaires [4 marks]

QUESTION THREE

- (a) Define documentation and explain five importance of documentation [6 marks]
- (b) Explain the following types of system conversion and also states the advantages and disadvantages of each [9 marks]
- i. Direct conversion
 - ii. Pilot conversion
 - iii. Parallel conversion

QUESTION FOUR

- (a) Define user training and explain five reasons for user training [6 marks]
- (b) Explain the following requirements and design modeling tools [9 marks]
- a. Flow charts
 - b. Data flow diagrams
 - c. Decision tables



QUESTION FIVE

- (a) Explain five factors to consider while selecting software in a computer system **[5 marks]**
- (b) Explain five reasons for undertaking system testing **[5 marks]**
- (c) Explain five measures of system quality **[5 marks]**

QUESTION SIX

- (a) Define the term project and explain five roles of project manager in system analysis and design **[6 marks]**
- (b) From the data below construct a network diagram, identify the critical path and estimate the duration the project will take till completion **[9 marks]**

Activity	Precedence	Duration (Weeks)
A	-	2
B	-	3
C	A	1
D	A	3
E	B	3
F	B	4
G	C	3
H	G	1
I	D, E	2
J	F	2

