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**University Examinations 2015/2016**

FIRST YEAR, SECOND SEMESTER EXAMINATION FOR THE DIPLOMA IN INFORMATION TECHNOLOGY

**CIT 2152: SYSTEMS ANALYSIS AND DESIGN**

**DATE: NOVEMBER 2015 TIME: 11/2 HOURS**

**INSTRUCTIONS:** *Answer question* ***one*** *and any other* ***two*** *questions*

**QUESTION ONE (30 MARKS)**

1. Define the term system analysis (2 Marks)
2. Name and describe three fact finding methods used to carry out investigations of a system(6 Marks)
3. Differentiate between technical feasibility and economic feasibility in system analysis (2 Marks)
4. Describe three traits of a system analyst. (6 Marks)
5. State two reasons why system are maintained. (2 Marks)
6. Define a prototype and outline the steps of developing a prototype (6 Marks)
7. Describe the reason why organizations train their staff during implementation process. (2 Marks)
8. Differentiate between decision tree and decision table. (2 Marks)

**QUESTION TWO (15 MARKS)**

1. State the difference between preliminary design and structured design (2 Marks)
2. Explain four categories of system end users (8 Marks)
3. Define system testing and describe two types of system testing (5 Marks)

**QUESTION THREE (15 MARKS)**

1. Explain the difference between waterfall model and spiral model. (6 Marks)
2. Differentiate between: (8 Marks)
3. Physical and logical systems

ii) Open and closed systems

iii) Tangible and intangible benefits

iv) System and software

1. Give two documents produced before design begins (1 Mark)

**QUESTION FOUR (15 MARKS)**

1. A supermarket has expanded its out lets around the town. At the moment the outlets use conventional cash tills. The supermarket would like to implement a Point-Of-Sale (POS) system in all its outlets with linkages to a centralized computer. Assume you are the systems analyst and you have been asked to assist in the convention process from the existing system to the new one: Explain the change-over options that are available and recommend the most suitable for the new system (10 Marks)
2. Give any tools and techniques used for describing system design (5 Marks)

**QUESTION FIVE (15 MARKS)**

During development of XY Library System, there were many rules documented, that is a procedure for becoming a member of library, rule for issuing books etc. The membership rule state:

“Anyone whose age is 18 or more than that can become a member of library. There are two types of memberships depending upon the duration of membership. First is for 6 months and other is for 1 year. 6 months membership fee is Ksh.500 and 1 year membership fee is Ksh.1000”.

1. Draw a decision tree for membership rule (8 Marks)
2. Draw a decision table for membership rule (7 Marks)