

**W1-2-60-1-6**

## JOMO KENYATTA UNIVERSITY

**OF**

**AGRICULTURE AND TECHNOLOGY**

# University Examinations 2015/2016

**FIRST YEAR SECOND SEMESTER SPECIAL/SUPPLEMENTARY EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN INFORMATION TECHNOLOGY**

**BIT 2112 : SYSTEM ANALYSIS AND DESIGN**

**DATE: FEBRUARY 2016 TIME: 2 HOURS**

**INSTRUCTIONS: ANSWER QUESTION ONE (COMPULSORY) AND ANY OTHER**

**TWO QUESTIONS.**

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**QUESTION ONE (30 MARKS)**

(a) What do you understand by the following terms: [5 marks]

1. Data.
2. System.
3. Information.
4. Software.
5. Hardware.

(b) Show the meaning of the following:

1. Structured analysis. [2 marks]
2. Object oriented analysis. [2 marks]
3. Agile methods. [2 marks]
4. Prototyping. [2 marks]

(c) State the objectives of RAD. [2 marks]

(d) What are the five questions typically used in fact finding? [5 marks]

(e) State the three rules you must conform to when you use structured English. Define structured English. [5 marks]

(f) Define object and give an example. [3 marks]

(g) How does polymorphism differ from encapsulation? [4 marks]

**QUESTION TWO (20 MARKS)**

(a) Explain the use of models, prototypes and CASE tools in the systems development process. Also explain the pros and cons of Agile development methods. [10 marks]

(b) Explaining their roles, state the various JAD participants. [10 marks]

**QUESTION THREE (20 MARKS)**

(a) Systems requirements fall into five general categories. With typical examples, give meaning to this statement. [10 marks]

(b) Why will you use interviews as a requirements analysis tool? Explain the steps for each interview. [10 marks]

**QUESTION FOUR (20 MARKS)**

(a) What do you understand by exploded DFD? [2 marks]

(b) Describe the steps in creating a decision table. [10 marks]

(c) Discuss the pros and cons of decision tables versus decision trees. [8 marks]

**QUESTION FIVE (20 MARKS)**

(a) Explain the software acquisition process. [10 marks]

(b) Explain the cost-benefit analysis checklist. [10 marks]