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University Examinations 2013/2014

FIRST YEAR, SECOND SEMESTER EXAMINATION FOR THE DEGREE IN BACHELOR OF SCIENCE IN INFORMATION TECHNOLOGY

AND

FIRST YEAR, SECOND SEMESTER EXAMINATION FOR THE DEGREE IN BACHELOR BUSINESS IN INFORMATION TECHNOLOGY

BIT 2112/ ICS 2210 –SYSTEMS ANALYSIS AND DESIGN

DATE: APRIL 2014   **TIME: 2HOURS**

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

QUESTION ONE – 30 MARKS

(a) Once you have decided to purchase off-the-shelf software rather than write some or all of the software for your new system, how do you decide what to buy?   (6 marks)

(b) Describe the skills required to be an effective project manager.   (6 marks)

(c) A project has been defined to contain the following list of activities along with their required times for completion. There is an overhead cost of Kshs. 1750 per day.

Activity No.	Activity	Time (weeks)	Immediate Predecessors	Cost (Kshs)
1	Collect requirements	3	-	10000
2	Analyze processes	2	1	15000
3	Analyze data	2	2	13000
4	Design processes	6	2	19000
5	Design data	3	3	14500
6	Design screens	2	3,4	12800
7	Design reports	4	4,5	16800
8	Program	5	6,7	1100
9	Test and Document	7	7	11500
10	Install	2	8,9	5600

    I.   Draw a network diagram for the activities.   (5 marks)

   II.   Calculate the earliest expected completion time.   (1 mark)

  III.   Show the critical path.   (1 mark)

  IV.   What would happen if activity 6 were revised to take 6 weeks instead of 2 weeks?

    (2 marks)

   V.   Compute the total cost of the project.   (3 marks)

d)   Explain three advantages and three pitfalls of observing workers to determine system requirements.   (6 marks)

QUESTION TWO –20 MARKS

(a) Describe six major activities that occur during the implementation phase of the systems development life cycle.   (6 marks)

(b) Describe four general guidelines for designing forms and reports.   (4 marks)

(c) Describe five objectives of information system security. (5 marks)

(d) Standards are important in most aspects of an information systems (IS) project, including its documentation. Briefly describe the benefits of standards in information systems development. (5 marks)

QUESTION THREE – 20MARKS

(a) Outline the steps that would be used in developing a prototype. (4 marks)

(b) Briefly explain the importance of systems theory concepts. (4 marks)

(c) In a given production process, a product is passed as fit for sale if it passes a mechanical and electrical tests, and has the correct dimensions. If it fails the mechanical or electrical test but not both, it is sent back to the workshop for repairs. In all other cases the product is rejected.

     i. Draw a decision table for the above narrative, illustrating all the stubs for drawing such a table. (4 marks)

    ii. Draw a decision tree to represent the same processing logic. (3 marks)

(d) Outline five golden principles of interface design. (5 marks)

QUESTION FOUR – 20MARKS

(a) Briefly describe the four quadrants of the spiral model of systems development.
(6 marks)

(b) Explain four reasons why and IT department might decide against using an integrated CASE tool for its systems development. (4 marks)

(c) Outline four reasons for decentralizing the information systems department. (4 marks)

(d) Explain the categories of CASE tools. (6 marks)

QUESTION FIVE – 20MARKS

(a) Differentiate between a decision support system and an expert system. (4marks)

(b) Outline six advantages of outsourcing the information systems department. (6 marks)

(c) Briefly explain the main features of the Structured Systems Analysis and Design Methodology(SSADM) (6 marks)

(d) Describe four participant roles within a structured walkthrough. (4 marks)