

2013
(JUNE)

**BACHELOR OF COMPUTER APPLICATIONS
(SYSTEM ANALYSIS AND DESIGN)**

Paper No. 402

Full Mark: 75

Time: 3 hours

The figures in the margin indicate full marks for the questions.

**PART -A: OBJECTIVE
(Marks : 25)**

SECTION - I

I. Tick (✓) the correct answer. (1X10=10)

i. The information supplied by comparing results with standards and informing the control elements of the differences is _____

- | | | |
|----|----------|---------|
| a) | Measure | () |
| b) | Feedback | () |
| c) | Control | () |
| d) | Cost | () |

ii. It provides input to be used in the managerial decision process.
Deals with supporting well-structured decision situations.

- | | | |
|----|-------------------------------|---------|
| a) | Decision support system | () |
| b) | Transaction processing system | () |
| c) | Management information system | () |
| d) | None of the above | () |

iii) This activity is at the heart of systems analysis. It relies on fact-finding techniques.

- a) Requirement anticipation ()
- b) Requirement investigation ()
- c) Requirement specification ()
- d) Requirement termination ()

iv) It is a matrix of rows and columns that shows conditions and actions

- a) Decision table ()
- b) Decision tree ()
- c) Structured english ()
- d) HIPO ()

v) An implementation - independent view of a system, focussing on the flow of data between processes without regard for the specific devices, storage locations or people in the system is _____

- a) Physical data flow diagram ()
- b) Logical data flow diagram ()
- c) PERT chart ()
- d) Bar chart ()

vi) System output may be

- a) Report only ()
- b) Document only ()
- c) Message only ()
- d) Report, document and message ()

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vii) The automated tools that assist in the formulation of program logic, processing algorithms and other details of computer processing is

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|----|------------------|-----|
| a) | Front -end tools | () |
| b) | Back -end tools | () |
| c) | Integrated tools | () |
| d) | Upgraded tools | () |

viii) This approach of reliability recognizes errors when they occur, but enables the system to keep running through degraded performance

- | | | |
|----|------------------|-----|
| a) | Error avoidance | () |
| b) | Error tolerance | () |
| c) | Error detection | () |
| c) | Error correction | () |

ix) _____ refers to the strength of the relationship between modules in a system.

- | | | |
|----|-----------------|-----|
| a) | Modularity | () |
| b) | Cohesion | () |
| c) | Coupling | () |
| d) | Span of control | () |

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x) It shows the relation between each of the documents making up a HIPO package.

- a) Visual table of contents ()
- b) Visible table of contents ()
- c) Virtual table of components ()
- d) Vector table of components ()

II. State whether True (T) or False (F). (5X1=5)

- i) Systems analysis and design refers to the process of examining a situation with the intent of improving it through better procedures and methods. ()
- ii) Structured English uses trees and tables to describe a procedure. ()
- iii) A processing delay resulting from data preparation or data entry operations is called a bottleneck. ()
- iv) A Warnier / Orr diagram uses a set of circles to show each level of the system. ()
- v) Live test data can be generated to test all combinations of formats and values. ()

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(5X1=5)

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SECTION II

III. Answer the following questions. (5X2=10)

- a) What elements of control are important in systems? How does the systems analyst benefit from knowing about control concepts?

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b) What is a decision rule? How is it stated in decision tables?

tables?

- c) Mention four objectives that guide input design.

- d) What are the advantages and disadvantages of in-house training?

use training?

- e) Draw a DFD for returning a book to a library.

IV/BCA /402

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**PART -B : DESCRIPTIVE
(Marks : 50)**

1. a) What are the different categories of management users?
Explain their characteristics. (5)
- b) Define system. Mention the different types of information systems with their characteristics. (5)

OR

- c) What is systems development life cycle? With a labelled diagram, describe the activities it includes. (5)
- d) Describe the systems prototype process. What are the roles played by systems analysts and end-users in the process? (5)

2. a) What are fact-finding techniques? Briefly explain the different fact-finding techniques. (6)
- b) In what way do decision trees assist in decision analysis? Explain how an analyst should develop a decision tree. (4)

OR

- c) What is a prototype? Discuss the steps in the prototype method. (5)
- d) How are data elements and data structures described in a data dictionary? (5)
3. a) Mention four commonly-used business graphics. For what type of information should each be used to be most effective? (4)
- b) What are coding methods? Discuss the different types. (6)

OR

- c) Describe the components of CASE tools, indicating the function performed by each. (5)
- d) Describe the benefits of using tools, manual or automated, in the development of information systems. What benefits are gained with the use of automated tools? (5)

4. a) Discuss the six special systems tests. Explain the purpose of each. (6)
- b) Explain the concept of structured flowcharts. What are the elements used in structured flowcharts? (4)

OR

- c) What methods are used for systems conversion? Briefly describe each. (6)
- d) Discuss the four levels of quality assurance. (4)
5. a) Develop a data flow diagram and design the database for Payroll system. (10)

OR

- b) Develop a data flow diagram and design the database for stock management system. (10)

*****IV/BCA/402*****