

2017

(2nd Semester)

BACHELOR OF COMPUTER APPLICATIONS

Paper No. : BCA-204

(System Analysis and Design)

Full Marks : 75

Time : 3 hours

(PART : B—DESCRIPTIVE)

(Marks : 50)

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

1. (a) What are the characteristics of a system? 5
 - (b) Differentiate between real-time and distributed systems. 5
- Or*
- (c) Explain briefly the types of systems. 5
 - (d) Explain system boundary and environment with examples. 5

2. (a) What is SDLC? Explain the various phases of SDLC. 10

Or

- (b) What is documentation? Explain the uses of documentation. 5
- (c) Explain different types of documentation. 5

3. (a) Write short notes on the following : 10
 - (i) Technical feasibility
 - (ii) Economic feasibility
 - (iii) Interviews
 - (iv) Group communication

Or

- (b) Define open-ended and closed-ended questionnaire. Explain how to develop a questionnaire. 10

4. (a) What is Entity Relationship Diagram? Explain the types of relationship exist among entities and construct an *E-R* diagram for a car insurance company whose customers own one or more cars each. Each car has associated with it zero to any number of recorded accidents. 10

(3)

Or

- (b) Illustrate the role of CASE tools in system analysis and design. What are its advantages and disadvantages? 10

5. (a) What is planning for system implementation? Explain the four methods of handling the system conversion. 5
- (b) List and discuss the desirable qualities of the system acceptance criteria. 5

Or

- (c) Explain the various stages in the testing process. 5
- (d) Discuss, in detail, about the quality assurance activity. 5

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Subject Code : II/BCA/204

Booklet No. A

Date Stamp

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To be filled in by the Candidate

DEGREE 2nd Semester
(Arts / Science / Commerce /
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Subject

Paper

INSTRUCTIONS TO CANDIDATES

- 1. The Booklet No. of this script should be quoted in the answer script meant for descriptive type questions and vice versa.**
- 2. This paper should be ANSWERED FIRST and submitted within 1 (one) Hour of the commencement of the Examination.**
- 3. While answering the questions of this booklet, any cutting, erasing, over-writing or furnishing more than one answer is prohibited. Any rough work, if required, should be done only on the main Answer Book. Instructions given in each question should be followed for answering that question only.**

To be filled in by the Candidate

DEGREE 2nd Semester
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Roll No.

Regn. No.

Subject

Paper

Descriptive Type

Booklet No. B

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Examiner(s)*

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(2nd Semester)

BACHELOR OF COMPUTER APPLICATIONS

Paper No. : BCA-204

(System Analysis and Design)

(PART : A—OBJECTIVE)

(Marks : 25)

The figures in the margin indicate full marks for the questions

A. Choose the correct answer by putting a Tick (✓) mark
in the brackets provided : 1×10=10

1. SDLC stands for

(a) Systems Development Life Cycle ()

(b) Structure Design Life Cycle ()

(c) System Design Life Cycle ()

(d) Structure Development Life Cycle ()

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(2)

2. _____ can be defined as an organized grouping of interdependent functioning units or components, linked together according to plan, to achieve a specific objective.

- (a) System ()
- (b) Information ()
- (c) Technology ()
- (d) Service ()

3. The detailed study of existing system is referred to as

- (a) system planning ()
- (b) system analysis ()
- (c) feasibility study ()
- (d) None of the above ()

4. The first step in the Systems Development Life Cycle is

- (a) system analysis ()
- (b) system design ()
- (c) problem/preliminary investigation ()
- (d) development and documentation ()

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(3)

5. A feasibility study is carried out
- (a) after final requirement specifications are drawn up ()
 - (b) during the period when requirement specifications are drawn up ()
 - (c) before the final requirement specifications are drawn up ()
 - (d) at any time ()
6. How many feasibility studies are conducted in Requirement Analysis?
- (a) 2 ()
 - (b) 4 ()
 - (c) 5 ()
 - (d) 3 ()
7. A logical or mathematical representation of a system is called
- (a) process modelling ()
 - (b) system modelling ()
 - (c) logical design ()
 - (d) None of the above ()

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(4)

8. The data flow diagram is the basic component of _____ system.

(a) conceptual ()

(b) physical ()

(c) logical ()

(d) All of the above ()

9. White-box testing is also known as

(a) glass-box testing ()

(b) functional testing ()

(c) structural testing ()

(d) Both (a) and (c) ()

10. Which maintenance is performed to correct any errors in the newly implemented system?

(a) Corrective maintenance ()

(b) Adaptive maintenance ()

(c) Perfective maintenance ()

(d) System maintenance ()

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(5)

B. State whether the following are *True (T)* or *False (F)* by putting a Tick (✓) mark : 1×5=5

1. An analyst is required to find solutions to problems.

(T / F)

2. The next major step before system design and after feasibility study is programming.

(T / F)

3. An information system is a closed system.

(T / F)

4. Entity relationship diagrams are used to design tables.

(T / F)

5. Planning is an iterative process.

(T / F)

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(6)

C. Answer the following questions :

2×5=10

1. Define manual and automated systems.

(7)

2. Differentiate between system analysis and system design.

3. Why is feasibility study important?

(8)

4. Write a short note on data dictionary.

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(9)

5. What is user interface?

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