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BACHELOR OF COMPUTER APPLICATIONS (B.C.A.)/BACHELOR
OF SCIENCE/SPECIALIZATION IN CYBER SECURITY
(CS)/BACHELOR OF SCIENCE (CYBER SECURITY)
EXAMINATION : DECEMBER-2025/JANUARY-2026
SEMESTER – II

Sub: Structured System Analysis & Design
(BCA243-20/BCA23-203/BSC24-203BCA-CS243-20/BCAC23-203/BSCC24-203)

Date :01/01/2026

Total Marks : 60

Time: 10.00 am to 12.30 pm

Instructions:

1. All questions are compulsory unless and otherwise stated.
 2. Bold figures to the right of every question are the maximum marks for that question. Candidates are advised to attempt questions in order.
 3. Answers written illegibly are likely to be marked zero.
 4. Use of scientific calculators, Log tables, Mollier Charts is allowed.
 5. Draw neat and labeled diagrams wherever necessary.
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Q.1. Fill in the blanks.

(05)

1. _____ normal form is data structure without internal repeating groups
 - a) Second
 - b) First
 - c) Fourth
 - d) Fifth
2. _____ is a fact finding technique in which analyst obtain information as a detached observer
 - a) Interview
 - b) Observation
 - c) Record review
 - d)) Group discussion
3. _____ model contains 4 stages and each stage is represented by one quadrant of the Cartesian diagram
 - a) RAD
 - b)) Waterfall model
 - c) Prototyping
 - d) Spiral Model
4. In Top level management of MIS ,the volume of information is _____
 - a) Summarized
 - b) Condensed
 - c) Detailed
 - d) Structured
5. SDLC stands for System _____ life cycle
 - a) Development
 - b) Design
 - c) Decision
 - d) Delay

Q.2. State True/False.

(05)

1. Decision tree is graphical representation of decision table
2. Forms are designed and used both for input and output purposes
3. Testing process is non iterative process
4. In hardware selection , RFP means - Request for proposal
5. In Questionnaire ,open ended questions contain specific questions and responses from which respondent has to choose the best one

Q.3. Answer the following. (Solve any 5) (10)

1. Define corrective maintenance and adaptive maintenance
2. What is deterministic and probabilistic system?
3. What is decision tree?
4. Define testing. Which are different testing approaches?
5. Define the terms -Project and Project management
6. Which are different levels of security ?

Q. 4. Answer the following in detail. (Solve any 6) (30)

1. Explain the concept of Entity relationship model (ER model)
2. What is RAD ? Explain
3. Write a note on multifaced role of system analyst
4. What is Normalization? Explain different levels of it
5. Explain decision table and its types
6. Explain the concept of output design
7. Explain procedure for software selection

Q. 5. Answer the following in detail. (Solve any 1) (10)

1. Explain different fact-finding techniques in detail
 2. Explain in detail the concept of Data flow diagram
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