



16754



LIBRARY
Brainware University
Barasat, Kolkata -700125

BRAINWARE UNIVERSITY

Term End Examination 2024-2025

Programme – BCA-2022

Course Name – Software Engineering

Course Code - BCAE601A

(Semester VI)

Full Marks : 60

Time : 2:30 Hours

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group-A

(Multiple Choice Type Question)

1 x 15=15

1. Choose the correct alternative from the following :

- (i) What is the first aspect to define when designing an object-oriented hotel booking system?
 - a) Objects
 - b) Methods
 - c) Class relationships
 - d) Data attributes
- (ii) Which of the following is a way to modify COCOMO-II for modern projects?
 - a) Include Agile factors
 - b) Remove cost components
 - c) Ignore project size
 - d) Use fewer effort multipliers
- (iii) Which method can improve project scheduling?
 - a) Use both PERT and CPM
 - b) Ignore task dependencies
 - c) Remove critical path
 - d) Skip time analysis
- (iv) How does reverse engineering help in software development?
 - a) Understanding existing software
 - b) Writing new software
 - c) Ignoring old code
 - d) Deleting software data
- (v) Why do companies often prioritize software reuse?
 - a) To develop software faster
 - b) To make software more complex
 - c) To increase development cost
 - d) To rewrite all code
- (vi) What is the most important feature of the Spiral Model?
 - a) Quality Management
 - b) Risk Management
 - c) Productivity Management
 - d) Efficiency estimation
- (vii) Which attribute is most associated with the Evolutionary Model in software engineering?
 - a) Sequential and rigid development phases
 - b) Emphasis on upfront planning and documentation
 - c) Iterative development with continuous evolution based on feedback
 - d) Minimal customer involvement throughout the development process
- (viii) What is the Full form of SRS?

- a) Software Requirement Specification
c) Software Re-engineering Specification
(ix) A Repository Query CASE tool is primarily used for:
a) Editing text and diagrams
c) Cross referencing queries and requirements tracing
(x) Levels of abstraction do not include:
a) Logical level
c) View level
(xi) Code reusability is primarily related to:
a) Abstraction
c) Encapsulation
(xii) Structured Analysis is associated with:
a) Top-down decomposition approach
c) Graphical representation of results using DFDs
(xiii) Which of the following is not a property of software modularity?
a) Modules are robust
c) Modules Can be separately compiled and stored in a library
(xiv) The measure of the degree of interdependence between modules is called:
a) Cohesion
c) None of the mentioned
(xv) The best type of module coupling is:
a) Control Coupling
c) Data Coupling
b) Scenario Requirement Specification
d) Software Recycle Specification
b) Display of parts of the design texts
d) Display of parts of the design texts AND Cross referencing queries and requirements tracing
b) Physical level
d) External level
b) Polymorphism
d) Inheritance
b) Divide and conquer principle
d) All of these
b) Module can use other modules
d) Modules are mostly dependent
b) Coupling
d) All of these
b) Stamp Coupling
d) Content Coupling

Group-B
(Short Answer Type Questions)

3 x 5=15

2. Identify Object Oriented approach of Software Design. (3)
3. Describe the feasibility study in software development. (3)
4. Explain Black Box and White Box testing. (3)
5. Describe McCall's Quality Triangle. (3)
6. Propose a framework for implementing software reuse in an enterprise. (3)
OR
Create a software reuse model for a real-world application. (3)

Group-C
(Long Answer Type Questions)

5 x 6=30

7. Evaluate various software design methodologies and determine which is most effective for different types of projects, justifying your choice with examples. (5)
8. Design a modular architecture for a software system of your choice, explaining how your design enhances maintainability, flexibility, and performance. (5)
9. Explain the importance of data flow diagrams (DFDs) in software design. (5)
10. What are the advantages and disadvantages of automated software testing? (5)
11. Evaluate the effectiveness of CASE tools in software development. (5)
12. Discuss the role of software quality models in software development. (5)
OR
Analyze the factors affecting software reliability and evaluate how different reliability growth models help improve software dependability. (5)