

(7 pages)

Reg. No. : .....

Code No. : 6028      Sub. Code : WCAM 22

M.C.A. (CBCS) DEGREE EXAMINATION,  
APRIL 2025.

Second Semester

Computer Application – Core

ADVANCED SOFTWARE ENGINEERING

(For those who joined in July 2023 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (15 × 1 = 15 marks)

Answer ALL questions.

Choose the correct answer :

1. \_\_\_\_\_ is the process of designing, developing, testing and maintaining software
- (a) Software
  - (b) Software Process
  - (c) Software Engineering
  - (d) Software Testing

2. Software is defined as \_\_\_\_\_.
- (a) set of configurations
  - (b) set of programs
  - (c) documentation and configuration of data
  - (d) set of programs, documentation and configuration of data
3. CASE stands for \_\_\_\_\_.
- (a) Computer-Assisted Software Enterprise
  - (b) Control Aided Science and Engineering
  - (c) Cost Aided System Experiments
  - (d) Computer-Aided Software Engineering
4. SRS stands for \_\_\_\_\_.
- (a) Software Requirements Specialization
  - (b) Software Requirements Specification
  - (c) System Requisition Software
  - (d) Software Response Specification
5. Attributes of good software is
- (a) Development
  - (b) Maintainability
  - (c) Functionality
  - (d) Maintainability and functionality

6. Who proposed the spiral model?  
(a) Barry Boehm (b) Pressman  
(c) Royce (d) Ritchie
7. What is the full form of the "COCOMO" model?  
(a) Cost Constructive Estimation Model  
(b) Constructive Cost Estimation Model  
(c) Constructive Case Estimation Model  
(d) Constructive Cost Estimating Model
8. Quality Management is known as \_\_\_\_\_.  
(a) SQI (b) SQA  
(c) SQM (d) SQA and SQM
9. Which of the following document contains the user system requirements?  
(a) SRD (b) DDD  
(c) SDD (d) SRS
10. Which of the following is not a part of Software evolution?  
(a) Re-engineering activities  
(b) Maintenance activities  
(c) Development activities  
(d) Negotiating with client

11. The word which describes the importance of software design is \_\_\_\_\_.  
(a) Complexity (b) Quality  
(c) Efficiency (d) Accuracy
12. Which tool is used for structured designing?  
(a) Program flowchart (b) Structure chart  
(c) Data-flow diagram (d) Module
13. Cohesion is a qualitative indication of the degree to which a module \_\_\_\_\_.  
(a) can be written more compactly  
(b) focuses on just one thing  
(c) is able to complete its function in a timely manner  
(d) is connected to other modules and the outside world
14. Which of the following term describes testing?  
(a) Finding broken code  
(b) Evaluating deliverable to find errors  
(c) A stage of all projects  
(d) Correcting the code

15. Boundary value analysis belong to \_\_\_\_\_.
- (a) Black box testing
  - (b) White box testing
  - (c) Yellow box testing
  - (d) Green box testing

PART B — (5 × 4 = 20 marks)

Answer ALL questions, choosing either (a) or (b).  
Each answer should not exceed 250 words.

16. (a) Categorize the challenges of Software Engineering.
- Or
- (b) Enumerate the software process models.
17. (a) Define Requirement Engineering. Categorize the types of requirements.
- Or
- (b) What do you mean by SQM? How it could be measured?
18. (a) Categorize the responsibilities of a software project manager.
- Or
- (b) Enumerate the metrics for project size estimation.

19. (a) Compare cohesion and coupling.
- Or
- (b) How will you characterise a good design?
20. (a) Demonstrate the black box testing strategies.
- Or
- (b) Illustrate the concept of software re-engineering.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).  
Each answer should not exceed 600 words.

21. (a) Explain the waterfall software process model with suitable example.
- Or
- (b) How will you use the iterative software process models? Explain.
22. (a) How to develop an axiomatic specification?
- Or
- (b) Determine the requirements analysis for student result management.

23. (a) Demonstrate the working procedure of COCOMO.

Or

(b) Illustrate the working procedure of SCM.

24. (a) Categorize the types of coupling.

Or

(b) Enumerate the solid features of function oriented design.

25. (a) Explain the art of debugging.

Or

(b) List out the various testing tools.

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