(7 pages)

Reg. No. : ....

Code No. : 6183   Sub. Code : WCAM 22

M.C.A. (CBCS) DEGREE EXAMINATION,
APRIL 2024

Second Semester

Computer Applications – 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. Which of these software engineering activities are not a part of software processes?

   (a) Software dependence

   (b) Software development

   (c) Software validation

   (d) Software specification

2. What are the features of software code?

   (a) Simplicity   (b) Accessibility

   (c) Modularity   (d) Security

3. Choose an internal software quality from given below ——————.

   (a) scalability   (b) usability

   (c) reusability   (d) reliability

4. Which one of the following is not a step of requirement engineering?

   (a) elicitation   (b) design

   (c) analysis   (d) documentation

5. —————— is not among the eight principles followed by the software code of ethics and professional practice.

   (a) product   (b) environment

   (c) public   (d) profession

6. —————— is not a fundamental activity for software processes in software development.

   (a) Evolution

   (b) Design and implementation

   (c) Validation

   (d) Verification

7. Which of the following is not an advantage of software reuse?

   (a) Lower costs

   (b) Faster software development

   (c) High effectiveness

   (d) lower risks

8. In the Analysis phase, the development of the ————— occurs, which is a clear statement of the goals and objectives of the project.

   (a) documentation

   (b) flowchart

   (c) program specification

   (d) design

9. ————— is the process of translating a task into a series of commands that a computer will use to perform that task.

   (a) Project design

   (b) Installation

   (c) Systems analysis

   (d) Programming

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 importance of software design can be summarized in a single word which is —————

    (a) Efficiency   (b) Accuracy

    (c) Quality   (d) Complexity

12. Which of the following is a design pattern?

    (a) Behavioral

    (b) Structural

    (c) Abstract Factory

    (d) All of the mentioned

13. White Box techniques are also classified as —————.

    (a) Design based testing

    (b) Structural testing

    (c) Error guessing technique

    (d) Unit testing

14. Software debugging is known as _____
    (a) identifying the task to be computerized
    (b) creating program code
    (c) creating the algorithm
    (d) finding and correcting errors in the program code

15. What type of software testing is generally used in software maintenance?
    (a) Regression Testing
    (b) System Testing
    (c) Integration Testing
    (d) Unit Testing

PART B — (5 × 4 = 20 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

16. (a) Discover the uses of software problem.

Or

(b) Identify the characteristics of a software process.

17. (a) Recall the purpose of feasibility studies.

Or

(b) Determine the requirement validation of software.

18. (a) Write a note on risk management.

Or

(b) Elucidate the techniques of project estimation.

19. (a) Devise the classification of design methodologies.

Or

(b) Summarize the classification of cohesiveness.

20. (a) Elaborate the terminologies of software testing.

Or

(b) Describe the different approaches to structural testing.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

21. (a) Evaluate the phased development process of software engineering.

Or

(b) Outline the different phases of the spiral model with diagram.

22. (a) Discriminate the characteristics of a good SRS document.

Or

(b) Generalize the need of software quality management system.

23. (a) Explain the COCOMO model for project estimation.

Or

(b) Enumerate the different types of staff level estimation.

24. (a) Compare and construct function-oriented design and object-oriented design.

Or

(b) Discuss the IEEE recommended practice for software design descriptions.

25. (a) Examine the importance of reverse engineering.

Or

(b) Conclude the various activities of configuration management.

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