(6 pages)

Reg. No. : ....

Code No. : 20507 E   Sub. Code : CMCA 42

B.C.A. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2023.

Fourth Semester

Computer Application – Core

SOFTWARE ENGINEERING

(For those who joined in July 2021-2022)

Time : Three hours   Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer:

1. _____ is developed to meet the specific needs of a particular customer.
   (a) Custom software
   (b) generic software
   (c) embedded software
   (d) None of these

2. _____ implements the behavior of the objects.
   (a) methods   (b) code
   (c) class   (d) instance

3. Which of the following is a requirement management activity?
   (a) Investigation
   (b) design
   (c) construction and test
   (d) All the above

4. _____ requirements describe what the system must do
   (a) Functional   (b) non-functional
   (c) domain   (d) stack

5. The extent of data interchange between two modules is called
   (a) coupling   (b) cohesion
   (c) structure   (d) union

6. It is usually difficult to identify the different modules of a program from its _____ representation.
   (a) ER   (b) flowchart
   (c) algorithm   (d) graphical

7. _____ is a component that is defined at the programming language level.
   (a) Module   (b) component
   (c) class   (d) package

8. _____ plays a central role in building construction.
   (a) architecture   (b) viewpoint
   (c) plan   (d) structure

9. The objective of the_____ integration testing is to check whether the different models of a program interface with each other properly
   (a) unit   (b) system
   (c) integration   (d) white box

10. Black box testing can be applied to _____.
    (a) UML diagram
    (b) Entity relationship diagram
    (c) Dataflow diagram
    (d) Flowcharts

PART B — (5 × 5 = 25 marks)

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

Each answer should not exceed 250 words.

11. (a) Write the role of stack holders in software engineering. Discuss it.

    Or

    (b) Write short notes on instance variables.

12. (a) Define Generalization. Discuss it.

    Or

    (b) What is brainstorming? Explain.

13. (a) What is UML? Explain with one example.

    Or

    (b) What is nested sub states and guard conditions? Explain.

14. (a) Compare Component diagram and Deployment diagram.

    Or

    (b) What is meant by Software metrics? Explain its types.

15. (a) Discuss project scheduling and tracking.

   Or

   (b) Define software reverse engineering. Discuss it.

PART C — (5 × 8 = 40 marks)

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

Each answer should not exceed 600 words.

16. (a) What are the categories of software projects? Discuss it.

   Or

   (b) Write the principle of structured analysis and explain about DFD diagrams.

17. (a) Explain the following:

   (i) Lines of code

   (ii) Function Point Metric.

   Or

   (b) Define risk management. Discuss it.

18. (a) What are state diagrams? Discuss it.

   Or

   (b) Write the characteristics of good software design.

19. (a) Explain Pipe and Filter architectural pattern.

   Or

   (b) Define MVC architectural pattern. Discuss it.

20. (a) Define waterfall model. Discuss it.

   Or

   (b) What are the defects in timing and coordination? Discuss it.

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