(6 pages) **Reg. No. :** .....

**Code No. : 30530 E** **Sub. Code : JMCA51/ SMCA51**

B.C.A. (CBCS) DEGREE EXAMINATION, NOVEMBER 2020.

Fifth Semester

Computer Application – Main

SOFTWARE ENGINEERING

(For those who joined in July 2016 onwards)

Time : Three hours Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. Choose an Internal software quality from given below

(a) Scalability (b) Usability

(c) Reusability (d) Reliability

2. Which of the following is a mechanism that allows several objects in a class hierarchy to have different methods with the same name?

(a) Aggregation (b) Polymorphism

(c) Inheritance (d) None of the above

3. Which one of the following is a requirement that fits in a developer models?

(a) Availability (b) Testability

(c) Usability (d) Flexibility

4. How many classification schemas have been developed for non-functional requirements?

(a) Three (b) Four

(c) Five (d) Six

5. Which one of the following is a functional requirement?

(a) Mainability (b) Portability

(c) Robustness (d) None of the above

6. What is the physical element that exists at runtime in UML?

(a) A node (b) An interface

(c) An activity (d) None of the above

7. Which diagram shows the configuration of runtime processing element?

(a) Development diagram

(b) Component diagram

(c) Node diagram

(d) EX-diagram

8. Which of the following is a total in design for?

(a) Abstraction (b) Refinement

(c) Information hiding (d) All the above

9. A set of inputs, execution preconditions and expected outcomes is known as a

(a) Test plan (b) Test case

(c) Test document (d) Test suite

10. Project risk factor is considering is ———— model.

(a) Spiral

(b) Waterfall

(c) Prototyping

(d) Interactive enhancement

PART B — (5 × 5 = 25 marks)

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

Each answer should not exceed 250 words.

11. (a) Explain about various types of software.

Or

(b) Explain about difficulties and risks in programming Language choice and OO programming.

12. (a) What is brainstorming? Explain.

Or

(b) What are the techniques available for gathering requirements?

13. (a) What is UML? Explain.

Or

(b) What is a state diagram? Explain.

14. (a) What are the goals wanted to achieve when doing good design?

Or

(b) How to develop an architectural model? Explain.

15. (a) What is dead lock? Explain.

Or

(b) What is the purpose of earned value charts? Explain.

PART C — (5 × 8 = 40 marks)

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

Each answer should not exceed 600 words.

16. (a) Explain about inheritance hierarchy of bank accounts for same attributes and operations.

Or

(b) What are the common activities to software properties? Explain.

17. (a) Explain about various types of requirements in detail.

Or

(b) How to describe a single use case? Explain.

18. (a) What is generalization? Explain.

Or

(b) Explain about sequence diagrams in detail.

19. (a) Explain about various types of cohesions in detail.

Or

(b) How to describe an architecture using UML? Explain.

20. (a) What are the defects handling stress unusual situations? Explain.

Or

(b) Explain about waterfall model in detail.

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