

**D 90104**

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Name.....

Reg. No.....

**FIFTH SEMESTER B.C.A. DEGREE EXAMINATION  
NOVEMBER 2020**

(CUCBCSS—UG)

B.C.A.

BCA 5B 10—PRINCIPLES OF SOFTWARE ENGINEERING

(2017 Admissions)

Time : Three Hours

Maximum : 80 Marks

**Section A**

*Answer all questions.*

*Each question carries 1 mark.*

1. List out the 5 framework activities of Software Engineering.
2. Define Software Engineering.
3. What do you mean by requirements engineering ?
4. Give the seven tasks of requirement engineering.
5. \_\_\_\_\_ is a quality management technique that translates the needs of the customer into technical requirements for software.
6. Which diagram is used to represent the behavior of the system by depicting its states and the events that cause the system to change state ?
7. \_\_\_\_\_ is a reorganization technique that simplifies the design (or code) of a component without changing its function or behavior.
8. What is called software re-engineering ?
9. What do you mean by validation of software ?
10. What is called unit testing ?

(10 × 1 = 10 marks)

**Section B**

*Answer at least five questions.*

*Each question carries 3 marks.*

*All questions can be attended.*

*Overall Ceiling 15.*

11. Write a short note on waterfall model.
12. What is the purpose of agile development process in the area of software engineering ?

13. Briefly write down about scenario based diagrams.
14. What are states and events of a system ? How will you depict the changes of state by the events ?
15. Why you need the software architecture to build software ?
16. Differentiate information hiding and functional independence.
17. What is Garvin's quality dimension ?
18. What are the testing strategies used for conventional software ?

(5 × 3 = 15 marks)

### Section C

*Answer at least five questions.*

*Each question carries 5 marks.*

*All questions can be attended.*

*Overall Ceiling 25.*

19. Describe incremental process models in detail.
20. Explain the extreme programming for the agile development process.
21. Why do you need requirements engineering? Explain.
22. What are the steps required for understanding the software requirements?
23. Draw a use case diagram for library management system.
24. Briefly write about package diagram with an example.
25. Explain neatly about different design concepts.
26. Write all guidelines required for documentation of software.
27. Describe all system testing techniques in detail.

(5 × 5 = 25 marks)

### Section D

*Answer any three questions.*

*Each question carries 10 marks.*

28. Suppose you are planning to develop a mobile application for a food delivery system. Which life cycle model you prefer ? Why ? Give the detail description of lifecycle model you prefer.
29. Explain the validation testing.
30. Draw the activity diagram and state chart diagram for online student registration system for university.
31. Explain about the exception handling techniques in modern programming language.
32. How will you elicit the requirements ? Explain.

(3 × 10 = 30 marks)