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Reg. No.

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IV Semester B.C.A. Degree Examination, August/September - 2023

**COMPUTER SCIENCE**  
**Software Engineering**  
**(CBCS Scheme Repeaters)**

Time : 3 Hours

Maximum Marks :100

*Instructions to Candidates:*

Answer All Sections.

**SECTION - A**

I. Answer any TEN questions. Each question carries 2 marks. (10×2=20)

1. Define Software Engineering.
2. Mention types of Software product.
3. Define Prototype.
4. What is SRS?
5. Mention Characteristics of GUI
6. What is cohesion?
7. Differentiate between verification and Validation.
8. What is acceptance testing?
9. What is RGM?
10. Define software reliability.
11. What is Test Plan?
12. What is Software Project Management?

**SECTION - B**

II. Answer any FIVE questions. Each question carries 5 marks. (5×5=25)

13. Explain different Phases of SDLC.
14. Write a note on Risk Management.
15. Explain different types of Prototyping.

[P.T.O.]





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16. Write IEEE structure of SRS document.
17. Explain Clean room software development process. Mention advantages and disadvantages.
18. Briefly explain System reliability engineering.
19. Write a note on Interface testing.
20. Explain different types of software maintenance.

#### SECTION - C

III. Answer any **THREE** questions. Each question carries 15 marks. (3×15=45)

21. a) Explain Waterfall model with a neat diagram. Mention its advantages and disadvantages.  
b) Explain System procurement process. (7+8)
22. a) Explain functional and non-functional requirements.  
b) Briefly explain System engineering process with a neat diagram (7+8)
23. a) What is Coupling? Explain different types of coupling.  
b) Explain function.- oriented design (8+7)
24. a) Explain different types of software Reliability Metrics.  
b) Explain styles of user system interaction (8+7)
25. a) Explain Black box and white box testing.  
b) Write a note on COCOMO model. (8+7)

#### SECTION - D

IV. Answer any **ONE** question. This question carries 10 marks. (1×10=10)

26. Explain Spiral model with neat diagram. Mention its advantages and disadvantages.
27. Explain different test strategies.



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IV Semester B.C.A. Degree Examination, September/October - 2022

COMPUTER SCIENCE

Software Engineering

(CBCS Scheme)

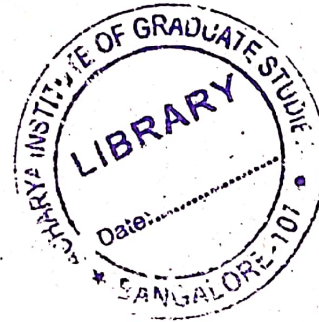
Paper - BCA 405 T

Time : 3 Hours

Maximum Marks : 100

Instructions to Candidates :

- 1) Answer all Sections.



## SECTION - A

I. Answer any TEN questions.

(10×2=20)

- 1) Define software Engineering.
- 2) Name the two types of software product.
- 3) Define system Engineering.
- 4) What is system decommissioning?
- 5) Define SRS.
- 6) Mention two advantages of prototype model.
- 7) What is coupling?
- 8) Define verification and validation.
- 9) Define Test Case.
- 10) What is RGM (Reliability Growth Model)?
- 11) What is Stress Testing?
- 12) Define Quality Assurance.

## SECTION - B

II. Answer any Five questions.

(5×5=25)

- 13) Describe system Procurement process.
- 14) Explain waterfall model with a neat diagram.
- 15) Explain the IEEE structure of SRS.
- 16) Explain Prototype with a neat diagram.
- 17) Write a note on system Reliability Engineering.

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- 18) Compare function oriented design & object oriented design.
- 19) Describe different Requirement validation checks.
- 20) Differentiate between Black Box and White Box Testing.

### SECTION - C

III. Answer any **Three** of the following. Each question carries **Fifteen** marks. (3×15=45)

- 21) a) Explain the different phases of SDLC.  
b) Explain the spiral model with neat diagram. (8+7)
- 22) Explain the Requirement Engineering process. (15)
- 23) a) What do you mean by function oriented design? Explain.  
b) Explain different styles of user system interaction. (8+7)
- 24) a) Describe different types of cohesion.  
b) Explain software Reuse. (8+7)
- 25) a) Explain the various types of Testing.  
b) Describe COCOMO model in detail. (7+8)

### SECTION - D

IV. Answer any **One** of the following. Each question carries **Ten** marks. (1×10=10)

- 26) Explain System Engineering process with a neat diagram. (10)
- 27) Write short note on the following : (5+5)
  - a) Feasibility study.
  - b) Risk management.