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V Semester B.C.A. Degree Examination, March/April – 2023
COMPUTER APPLICATIONS
Software Engineering
(CBCS Scheme)

Time : 3 Hours **Maximum Marks : 100**

Instructions to Candidates:

Answer all questions.

SECTION - A

I. Answer any **Ten** questions. (10×2=20)

1. Define System.

2. What are the two types of software products?

3. What is feasibility study?

4. Mention two advantages of prototype.

5. Define cohesion.

6. Define object and class.

7. What are the characteristics of GUI?

8. What is a test case?

9. Differentiate between verification and validation.

10. Define SRS.

11. Define quality assurance.

12. What is a risk?

[P.T.O.

SECTION - B

II.   Answer any **Five** questions.   (5×5=25)

13.   Explain waterfall model with its advantages and disadvantages.

14.   Explain the different phases of system design process with a diagram.

15.   Explain the IEEE structure of SRS document.

16.   Differentiate between black box and white box testing.

17.   Describe design principles.

18.   Write a note on system reliability.

19.   Explain the contents of test plan.

20.   Write a note on quality management.

SECTION - C

III. Answer any **Three** questions.   (3×15=45)

21.   a)   Explain different phases of SDLC.   (8)

      b)   Explain different reliability metrics.   (7)

22.   Explain the requirement engineering process.   (15)

23.   a)   Explain function oriented design.   (8)

      b)   Explain different styles of user system interaction.   (7)

24.   a)   Explain different types of coupling.   (8)

      b)   Explain software reuse.   (7)

25.   a)   Describe clean room software development process.   (8)

      b)   Explain different types of software maintenance.   (7)

SECTION - D

IV.   Answer any **One** question.   (1×10=10)

26.   Explain Cocomo model in detail.

27.   Explain system engineering process with a neat diagram.

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Reg. No. ☐☐☐☐☐☐☐

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.

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.