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**G. VENKATASWAMY NAIDU COLLEGE (AUTONOMOUS), KOVILPATTI – 628 502.**



**UG DEGREE END SEMESTER EXAMINATIONS - NOVEMBER 2025.**

(For those admitted in June 2023 and later)

**PROGRAMME AND BRANCH: B.Sc., COMPUTER SCIENCE**

| SEM | CATEGORY   | COMPONENT | COURSE CODE | COURSE TITLE         |
|-----|------------|-----------|-------------|----------------------|
| V   | PART - III | CORE – 5  | U23CS505    | SOFTWARE ENGINEERING |

**Date & Session: 04.11.2025/FN**

**Time : 3 hours**

**Maximum: 75 Marks**

| Course Outcome | Bloom's K-level | Q. No. | <p><b>SECTION – A (10 X 1 = 10 Marks)</b><br/> <b>Answer ALL Questions.</b></p>                                                                                                                                                                                                                          |
|----------------|-----------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CO1            | K1              | 1.     | Which of the following is not a symptom of the present software crisis:<br>a) Software is expensive.<br>b) It takes too long to build a software product.<br>c) Software is delivered late.<br>d) Software products are required to perform very complex tasks.                                          |
| CO1            | K2              | 2.     | Which one of the following feedback paths is not present in an iterative waterfall model?<br>a) Design phase to feasibility study phase<br>b) Implementation phase to design phase<br>c) Implementation phase to requirements specification phase<br>d) Design phase to requirements specification phase |
| CO2            | K1              | 3.     | A software requirements specification (SRS) document should avoid discussing which one of the following?<br>a) Functional requirements                      b) Non-functional requirements<br>c) Design specification                          d) Constraints on the implementation                      |
| CO2            | K2              | 4.     | Which of the following type of cohesion can be considered as the strongest cohesion:<br>a) Logical                                              b) Coincidental<br>c) Temporal                                            d) Functional                                                                  |
| CO3            | K1              | 5.     | A DFD depicts which of the following?<br>a) Flow of data                                      b) Flow of control<br>c) Flow of statements                              d) None of the above                                                                                                              |
| CO3            | K2              | 6.     | Which of the following types of interfaces would the novice users find the easiest to use?<br>a) Direct manipulation interfaces<br>b) Menu-based interfaces<br>c) Command-based interfaces<br>d) Combination of menu and command interfaces                                                              |
| CO4            | K1              | 7.     | Which one of the followings is not a recognized software testing technique?<br>a) Data-flow testing                                b) Path testing<br>c) Syntax testing                                    d) Decision testing                                                                           |
| CO4            | K2              | 8.     | Which of the following is a practical use of reliability growth Modelling?<br>a) Determine the operational life of an application software<br>b) Determine when to stop testing<br>c) Incorporate reliability information while designing<br>d) Incorporate reliability growth information in the code   |

|                       |                        |               |                                                                                                                                                                                                                                           |
|-----------------------|------------------------|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CO5                   | K1                     | 9.            | Which one of the following effectively integrates the different tools in a CASE environment?<br>a) Software requirements specification (SRS) document<br>b) Central data repository<br>c) Incremental compilation<br>d) User intervention |
| CO5                   | K2                     | 10.           | Which of the following types of maintenance consumes the maximum effort for a typical software?<br>a) Adaptive                      b) Corrective                      c) Preventive                      d) Perfective                   |
| <b>Course Outcome</b> | <b>Bloom's K-level</b> | <b>Q. No.</b> | <b>SECTION – B (5 X 5 = 25 Marks)</b><br><b>Answer <u>ALL</u> Questions choosing either (a) or (b)</b>                                                                                                                                    |
| CO1                   | K3                     | 11a.          | Mention the discipline of software engineering.<br><b>(OR)</b>                                                                                                                                                                            |
| CO1                   | K3                     | 11b.          | Illustrate spiral model with neat diagram.                                                                                                                                                                                                |
| CO2                   | K3                     | 12a.          | Examine the various characteristics of a good SRS document<br><b>(OR)</b>                                                                                                                                                                 |
| CO2                   | K3                     | 12b.          | Illustrate Function Oriented Design and Object Oriented Design.                                                                                                                                                                           |
| CO3                   | K4                     | 13a.          | Differentiate Transform analysis and Transaction analysis.<br><b>(OR)</b>                                                                                                                                                                 |
| CO3                   | K4                     | 13b.          | Analyze the various characteristics of a good User Interface.                                                                                                                                                                             |
| CO4                   | K4                     | 14a.          | What are the techniques available for Code Review? Examine in detail.<br><b>(OR)</b>                                                                                                                                                      |
| CO4                   | K4                     | 14b.          | Clarify about software reliability metrics and its limitations.                                                                                                                                                                           |
| CO5                   | K5                     | 15a.          | What type of support do CASE tools provide during software life cycle?<br><b>(OR)</b>                                                                                                                                                     |
| CO5                   | K5                     | 15b.          | List out and explain various characteristics of Software Evolution.                                                                                                                                                                       |

|                       |                        |               |                                                                                                        |
|-----------------------|------------------------|---------------|--------------------------------------------------------------------------------------------------------|
| <b>Course Outcome</b> | <b>Bloom's K-level</b> | <b>Q. No.</b> | <b>SECTION – C (5 X 8 = 40 Marks)</b><br><b>Answer <u>ALL</u> Questions choosing either (a) or (b)</b> |
| CO1                   | K3                     | 16a.          | Sketch and explain the waterfall model.<br><b>(OR)</b>                                                 |
| CO1                   | K3                     | 16b.          | Examine Prototype Life Cycle Model with suitable examples.                                             |
| CO2                   | K4                     | 17a.          | Discuss Formal System Specification.<br><b>(OR)</b>                                                    |
| CO2                   | K4                     | 17b.          | What were the main motive behind Cohesion and Coupling? Explain their types with suitable examples.    |
| CO3                   | K4                     | 18a.          | Examine Data Flow Diagrams with a neat diagram.<br><b>(OR)</b>                                         |
| CO3                   | K4                     | 18b.          | Differentiate various types of User Interface.                                                         |
| CO4                   | K5                     | 19a.          | Evaluate Black Box Testing with suitable examples.<br><b>(OR)</b>                                      |
| CO4                   | K5                     | 19b.          | Discuss SEI capability maturity model.                                                                 |
| CO5                   | K5                     | 20a.          | Explain in detail about various characteristics of CASE Tool.<br><b>(OR)</b>                           |
| CO5                   | K5                     | 20b.          | Critically evaluate the function of Software Reverse Engineering Concept.                              |