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| KONGU ENGINEERING COLLEGE, PERUNDURAI - 638 060 |
| CONTINUOUS ASSESSMENT TEST – II |
| (Regulations2020) |

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| Month and Year | : | November2022 | Roll Number | : |  |
| Programme | : | B.Tech. | Date | : | 23.11.2022 |
| Branch | : | IT | Time | : | 02.15pm to 04.15pm |
| Semester | : | V | Duration | : | 02.00 Hours |
| Course Code | : | 20ITT53 | Max. Marks | : | 60 |
| Course Name | : | Software Engineering |  |  |  |

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| **PART ­- A (10 × 2 = 20 Marks)** | | | | | |
| **ANSWER ALL THE QUESTIONS** | | | | | |
|  | State the purpose of interaction diagram. | | | CO3 | K1 |
|  | Mention the use of deployment diagram. | | | CO3 | K1 |
|  | Give the characteristics of well-formed design class. | | | CO4 | K1 |
|  | Differentiate between cohesion and coupling in component level design. | | | CO4 | K2 |
|  | What is meant by refactoring? why it is required? | | | CO4 | K2 |
|  | Suggest an example for Open-Closed principle (OCP) of software component design. | | | CO4 | K2 |
|  | Define independent program path in a program. Clarify with an example. | | | CO5 | K2 |
|  | Distinguish between alpha testing and beta testing. | | | CO5 | K2 |
|  | Justify the need of software configuration management. | | | CO5 | K2 |
|  | Tell about status reporting in SCM. | | | CO5 | K1 |
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| **Part – B (4 × 10 = 40 Marks)** | | | | | |
| **ANSWER ANY FOUR QUESTIONS** | | | | | |
| 11. |  | Draw sequence diagram and activity diagram for the following scenario. A customer uses a bank ATM to check the balance of his own bank account, deposit amount, withdraw amount and transfers fund to other account. | (10) | CO3 | K2 |
| 12. |  | Compare the various architectural styles. Also bring out the advantages and disadvantages of the architectural styles. | (10) | CO4 | K2 |
| 13. |  | Illustrate the interface design elements for safe home control panel system. | (10) | CO4 | K3 |
| 14. | i) | Sketch the swim lane diagram for prescription refill function. | (6) | CO4 | K2 |
|  | ii) | Each time a new module is added as part of integration testing which may cause problem with functions that previously worked flawlessly, which testing strategy is useful for reducing side effects? How often the test needs to be conducted. | (4) | CO5 | K3 |
| 15. | i) | For the given flow graph calculate the Cyclomatic complexity. | (5) | CO5 | K3 |
|  | ii) | Consider a ticket booking system where the children under age 6 are allowed to travel free, people under 18 as well as senior people above age 65 has to pay ticket fare as Rs 50/-, while adult need to pay Rs/-75.Write the test case for testing this system equivalence class partitioning and boundary value analysis. | (5) | CO5 | K3 |
| 16. | i) | Why do need to conduct system testing? Categorize it types. Highlights the function of each type of system testing. | (6) | CO5 | K3 |
|  | ii) | Brief the change control in software configuration management. | (4) | CO5 | K2 |

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| Bloom’s Taxonomy Level | Remembering  (K1) | Understanding  (K2) | Applying  (K3) | Analysing  (K4) | Evaluating  (K5) | Creating  (K6) |
| Percentage | 10.00 | 52.50 | 37.50 | - | - | - |