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R. V. COLLEGE OF ENGINEERING

Autonomous Institution affiliated to VTU

VI Semester B. E. Examinations Aug-2022

Common to ISE/CSE

SOFTWARE ENGINEERING*Time: 03 Hours**Maximum Marks: 100***Instructions to candidates:**

1. Answer all questions from Part A. Part A questions should be answered in the first three pages of the answer book only.
2. Answer FIVE full questions from Part B.

PART A

| | | | |
|---|------|--|----|
| 1 | 1.1 | What are the advantages of incremental model? | 02 |
| | 1.2 | Mention the advantages and disadvantages of waterfall model. | 02 |
| | 1.3 | Mention any two non-functional requirements on software to be developed. | 02 |
| | 1.4 | What is the major distinction between user requirements and system requirements? | 02 |
| | 1.5 | Name the commonly used architectural styles. | 02 |
| | 1.6 | What are the different types of cohesion? | 02 |
| | 1.7 | Distinguish between verification and validation. | 02 |
| | 1.8 | Distinguish between alpha and beta testing. | 02 |
| | 1.9 | How the CASE tools are classified? | 02 |
| | 1.10 | What is COCOMO model? | 02 |

PART B

| | | | |
|-----------|---|---|----|
| 2 | a | What are the major differences between system engineering and software engineering? State and outline the stages of system engineering. | 08 |
| | b | With suitable illustration, explain SPIRAL model evolutionary software development. | 08 |
| OR | | | |
| 3 | a | Explain the evolutionary and incremental model. What are the advantages and disadvantages of these models? | 08 |
| | b | Which is more important- the product or process? Justify your answer with appropriate examples. | 08 |
| | | | |
| 4 | a | What is requirement engineering? State its process and explain the activities involved in detail. | 08 |
| | b | Why is traceability an important aspect of requirement management? Why context system models are useful for requirement validation? | 08 |
| OR | | | |

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|----|---|--|----|
| 5 | a | What are the different types of prototyping? Explain rapid prototyping in detail. | 08 |
| | b | Differentiate between functional and non-functional requirements. | 08 |
| 6 | a | Justify “Design is not coding and coding is not design” with appropriate examples. | 08 |
| | b | What are the different types of architectural styles exist for software and explain any one software architecture. | 08 |
| | | OR | |
| 7 | a | Discuss in detail the importance of design process in software development. | 08 |
| | b | Write short notes on “object oriented design” as compared to traditional design. | 08 |
| 8 | a | What are the attributes of the good test? Explain the components of a test case. | 08 |
| | b | What is the necessity of unit testing? What are different ways in which unit testing is performed? | 08 |
| | | OR | |
| 9 | | Write short notes on i. Black box testing ii. Regression testing iii. White box testing iv. Integration testing. | 16 |
| 10 | a | Justify the statement “software maintenance is costlier than development” with appropriate examples. | 08 |
| | b | Explain the importance of “The people capability maturity model (PCMM)”. | 08 |
| | | OR | |
| 11 | a | Explain the importance of COCOMO model. | 08 |
| | b | Discuss the various methods involved in cost estimation. | 08 |