

FACULTY OF ENGINEERING
B.E. 3/4 (CSE) I - Semester (Suppl.) Examination, May/June 2018

Subject : Software Engineering

Max. Marks: 75

Time : 3 Hours

Note: Answer all questions from Part-A & answer any five questions from Part-B.

PART – A (25 Marks)

- 1 Why is software engineering said to be a layered technology? (3)
- 2 What is Process Assessment? (2)
- 3 What is the use of Gantt chart? Explain with example. (2)
- 4 What are the advantages of COCOMO-II over COCOMO? (3)
- 5 What do you understand by the term 'Design Quality'? (2)
- 6 Describe the difference between an Association and a Dependency for an analysis class. (3)
- 7 What are the uses of Transform Mapping and Transaction Mapping? (3)
- 8 Briefly explain about Decision Table. (2)
- 9 What are the errors that are commonly found during Unit Testing? (2)
- 10 Is Integration testing necessary when all modules have been Unit Tested? (3)

PART – B (50 Marks)

- 11 (a) What is Unified Process? Explain the various phases in it. (5)
 (b) Discuss Prototyping – Based development Model by bringing out its advantages and disadvantages. (5)
- 12 (a) List the various tasks involved in Requirement Engineering. Explain about each task in short. (5)
 (b) Explain COCOMO-II Effort Estimation method with example. List its advantages and disadvantages. (5)
- 13 (a) What does Behavioural model indicate? What are the steps that analyst must perform to create the model? (5)
 (b) Discuss the following design concepts (i) modularity (ii) refinement (iii) Refactoring (5)
- 14 (a) Explain the various Architectural Styles in Detail, (or) Explain various architectural styles and patterns in detail. (5)
 (b) Explain in detail the various design issues associated with User Interface Design. (5)
- 15 (a) What do Regression and Smoke Testing try to uncover? Explain. (4)
 (b) What is meant by structural complexity of a program? Write a metric for measuring the structural complexity of a program. (6)
- 16 (a) What is Cyclomatic Complexity? How to compute it? Explain with the help of an example. (4)
 (b) What Testing options are available at the Class level? (3)
 (c) Explain about Alpha & Beta Testing. (3)
- 17 (a) Discuss the concept of Spiral Model proposed by Barry Boehm with the help of a diagram. List any three strengths and weaknesses of the model. (7)
 (b) List any five Agile Principles and explain them in your own words. (3)

FACULTY OF ENGINEERING**B.E. 3/4 (CSE) I-Semester (New) (Main) Examination, Nov. / Dec. 2016****Subject : Software Engineering****Time : 3 hours****Max. Marks : 75****Note: Answer all questions from Part-A. Answer any FIVE questions from Part-B.****PART – A (25 Marks)**

- | | | |
|----|---|---|
| 1 | What is Generic software process? | 2 |
| 2 | What is a Pattern? | 3 |
| 3 | What is work break down structure? | 2 |
| 4 | How can you manage the requirements? | 3 |
| 5 | What is cohesion and coupling? | 2 |
| 6 | Define use-case. Draw a neat use-case diagram for ATM system. | 3 |
| 7 | What is a components? | 2 |
| 8 | What is the process of Evaluating interface design? | 3 |
| 9 | How are verification and validation important individually? | 2 |
| 10 | What is function point? How do you compute function points? | 3 |

PART – B (50 Marks)

- | | | |
|-------|--|----|
| 11 a) | Explain CMMI in detail. | 5 |
| b) | What is Agility? Explain extreme programming and crystal process models in detail. | 5 |
| 12 a) | Explain about software project planning. | 5 |
| b) | What is requirements engineering? List various tasks of requirements engineering. Explain about inception in detail. | 5 |
| 13 a) | Explain in detail about class-based modeling approach with an example. | 5 |
| b) | Explain the design model. | 5 |
| 14 | Explain the Golden rules performed in user interface design. | |
| 15 | Explain white box testing in detail. | 10 |
| 16 a) | What is Debugging? Explain different debugging approaches. | 5 |
| b) | Define measure, metric. Explain the metrics for testing. | 5 |
| 17 | Write short notes on the following : | |
| a) | Specialized process models | 4 |
| b) | Security testing | 3 |
| c) | Risk Management | 3 |

FACULTY OF ENGINEERING**B.E. 3/4 (CSE) I - Semester (Old) Examination, November / December 2016****Subject : Software Engineering****Time : 3 Hours****Max. Marks: 75****Note: Answer all questions from Part-A and answer any five questions from Part-B.****PART – A (25 Marks)**

- 1 Why is software Engineering is said to be a layered technology? (3)
- 2 What is a core product? (2)
- 3 What is Work break down structure? (3)
- 4 What is a Gantt chart? Why is it important in software development? (2)
- 5 Define Use-case diagram. Explain with an example. (3)
- 6 What is Information Hiding? (2)
- 7 Are stepwise refinement and factoring the same thing? If not, how do they differ? (2)
- 8 Define Coupling. List various types of coupling. (3)
- 9 What is function point? How do you compute function points? (3)
- 10 What is Regression Testing? (2)

PART – B (50 Marks)

- 11 (a) Explain CMMI in detail. (5)
(b) What is Agility? Explain XP and ASD models. (5)
- 12 (a) Explain in detail about software project planning. (5)
(b) What is the purpose of Requirements elicitation? Explain, how are the different stakeholders involved in Requirements Elicitation? (5)
- 13 (a) Enumerate the characteristics of a good software design. (5)
(b) Explain class-based modeling in detail. (5)
- 14 (a) Define software Architecture. Explain the importance of software Architecture in software development. (5)
(b) What is a Component? Explain how to conduct component-level design. (5)
- 15 Explain White-Box Testing in detail. (10)
- 16 (a) What is Debugging ? Explain different Debugging approaches. (5)
(b) Explain behavioral modeling. (5)
- 17 Write short notes on the following:
 - (a) Unified Process model (4)
 - (b) Risk Management (3)
 - (c) Alpha and Beta Testing (3)

Code No. 3434 / N/S

FACULTY OF ENGINEERING

B.E. 3/4 (CSE) I-Semester (New) (Suppl.) Examination, May / June 2017

Subject : Software Engineering

Time : 3 hours

Max. Marks : 75

Note: Answer all questions from Part-A. Answer any FIVE questions from Part-B.

PART – A (25 Marks)

- | | | |
|----|---|---|
| 1 | Why software engineering is said to be layered technology? | 2 |
| 2 | What is Agility? | 3 |
| 3 | What is an analysis model? | 2 |
| 4 | Briefly discuss about the tracking the progress of the project. | 3 |
| 5 | Define cardinality and modality. | 2 |
| 6 | Distinguish between refactoring and refinement. | 3 |
| 7 | What is software architecture? | 2 |
| 8 | What is object constraint language? | 3 |
| 9 | What is stress testing? | 2 |
| 10 | What is pattern? Discuss about testing patterns. | 3 |

PART – B (50 Marks)

- | | | |
|-------|--|---|
| 11 a) | What is process framework? Explain about the umbrella activities of a software process framework. | 5 |
| b) | Distinguish between incremental and evolutionary process models. Explain spiral model in detail. | 5 |
| 12 a) | Explain about software project personnel. | 5 |
| b) | What is the purpose of requirements Elicitation? Who are the different stake holders involved in requirements elicitation? | 5 |
| 13 a) | Enumerate the characteristics of a good software design. | 5 |
| b) | Explain Scenario based modeling approach. | 5 |
| 14 a) | Define cohesion and coupling. Explain its types. | 5 |
| b) | What is a component? Explain how to conduct component-level design. | 5 |
| 15 a) | Define software testing. Explain Alpha testing and Beta testing. | 5 |
| b) | Explain the concept of basis path testing in detail with an example. | 5 |
| 16 a) | Explain O-O testing methods. | 5 |
| b) | List out ISO quality factors and discuss about the metrics for maintenance. | 5 |
| 17 | Write short notes on the following : | |
| a) | Unified process | 4 |
| b) | Regression testing | 3 |
| c) | Personal and team process | 3 |

FACULTY OF ENGINEERING

B.E. 3/4 (CSE) I-Semester (New) (Main) Examination, Nov. / Dec. 2016

Subject : Software Engineering

Time : 3 hours

Max. Marks : 75

Note: Answer all questions from Part-A. Answer any FIVE questions from Part-B.

PART – A (25 Marks)

- | | | |
|----|---|---|
| 1 | What is Generic software process? | 2 |
| 2 | What is a Pattern? | 3 |
| 3 | What is work break down structure? | 2 |
| 4 | How can you manage the requirements? | 3 |
| 5 | What is cohesion and coupling? | 2 |
| 6 | Define use-case. Draw a neat use-case diagram for ATM system. | 3 |
| 7 | What is a components? | 2 |
| 8 | What is the process of Evaluating interface design? | 3 |
| 9 | How are verification and validation important individually? | 2 |
| 10 | What is function point? How do you compute function points? | 3 |

PART – B (50 Marks)

- | | | |
|-------|--|----|
| 11 a) | Explain CMMI in detail. | 5 |
| b) | What is Agility? Explain extreme programming and crystal process models in detail. | 5 |
| 12 a) | Explain about software project planning. | 5 |
| b) | What is requirements engineering? List various tasks of requirements engineering. Explain about inception in detail. | 5 |
| 13 a) | Explain in detail about class-based modeling approach with an example. | 5 |
| b) | Explain the design model. | 5 |
| 14 | Explain the Golden rules performed in user interface design. | |
| 15 | Explain white box testing in detail. | 10 |
| 16 a) | What is Debugging? Explain different debugging approaches. | 5 |
| b) | Define measure, metric. Explain the metrics for testing. | 5 |
| 17 | Write short notes on the following : | |
| a) | Specialized process models | 4 |
| b) | Security testing | 3 |
| c) | Risk Management | 3 |

FACULTY OF ENGINEERING

B.E. 3/4 (CSE) I - Semester (Old) Examination, November / December 2016

Subject : Software Engineering

Time : 3 Hours

Max. Marks: 75

Note: Answer all questions from Part-A and answer any five questions from Part-B.

PART – A (25 Marks)

- 1 Why is software Engineering is said to be a layered technology? (3)
- 2 What is a core product? (2)
- 3 What is Work break down structure? (3)
- 4 What is a Gantt chart? Why is it important in software development? (2)
- 5 Define Use-case diagram. Explain with an example. (3)
- 6 What is Information Hiding? (2)
- 7 Are stepwise refinement and factoring the same thing? If not, how do they differ? (2)
- 8 Define Coupling. List various types of coupling. (3)
- 9 What is function point? How do you compute function points? (3)
- 10 What is Regression Testing? (2)

PART – B (50 Marks)

- 11 (a) Explain CMMI in detail. (5)
(b) What is Agility? Explain XP and ASD models. (5)
- 12 (a) Explain in detail about software project planning. (5)
(b) What is the purpose of Requirements elicitation? Explain, how are the different stakeholders involved in Requirements Elicitation? (5)
- 13 (a) Enumerate the characteristics of a good software design. (5)
(b) Explain class-based modeling in detail. (5)
- 14 (a) Define software Architecture. Explain the importance of software Architecture in software development. (5)
(b) What is a Component? Explain how to conduct component-level design. (5)
- 15 Explain White-Box Testing in detail. (10)
- 16 (a) What is Debugging ? Explain different Debugging approaches. (5)
(b) Explain behavioral modeling. (5)
- 17 Write short notes on the following: (4)
(a) Unified Process model (4)
(b) Risk Management (3)
(c) Alpha and Beta Testing (3)

Code No. 5154

FACULTY OF ENGINEERING

B.E. 3/4 (CSE) I - Semester (Main) Examination, December 2015

Subject : Software Engineering

Time : 3 hours

Max. Marks : 75

Note: Answer all questions from Part-A. Answer any FIVE questions from Part-B.

PART – A (25 Marks)

- 1 Differentiate between personal and team process models. 3
- 2 What is a core product? 2
- 3 What is work breakdown structure? 2
- 4 What is "collaborative requirements gathering"? Enlist the guidelines for it. 3
- 5 Define use-case diagram. Explain with an example. 3
- 6 Define abstraction. 2
- 7 What is transform mapping? 2
- 8 What is regression test? 3
- 9 What is function point? How do you compute function points? 3
- 10 How are verification and validation important individually? 2

PART – B (50 Marks)

- 11 a) What is process framework? Explain about the umbrella activities of a software process framework? 5
- b) Explain unified process model. 5
- 12 a) What is Risk? Explain how risk is managed? 5
- b) List various requirements engineering tasks. Explain about inception in detail. 5
- 13 a) How to create a behavioural model? Explain about the state representations. 5
- b) Explain design concepts. 5
- 14 Explain architectural styles and patterns in detail. 10
- 15 Explain white-box testing and black-box testing. 10
- 16 a) Brief about top-down and bottom-up integration testing. 5
- b) What is a metric? Explain the metrics for design model? 5
- 17 Write short notes on :
 - a) Agile process 4
 - b) Design evaluation 3
 - c) Debugging 3

Code No. 9113 / S

FACULTY OF ENGINEERING

B.E. 3/4 (CSE) I – Semester (Suppl.) Examination, June / July 2015

Subject : Software Engineering

Time : 3 hours

Max. Marks : 75

Note: Answer all questions from Part-A. Answer any FIVE questions from Part-B.

PART – A (25 Marks)

- | | |
|--|---|
| 1 Why is software engineering said to be a layered technology? | 3 |
| 2 What is Agility? | 2 |
| 3 What is Effort? How is effort estimated? | 2 |
| 4 What is Requirements Management? | 3 |
| 5 Differentiate between cardinality and modality. | 3 |
| 6 What is information hiding? | 2 |
| 7 Define coupling. List various types of coupling. | 3 |
| 8 Is stepwise refinement similar to factoring? If not, how do they differ. | 2 |
| 9 What is software quality? Discuss a few attributes of quality. | 3 |
| 10 Define measure and metric. | 2 |

PART – B (50 Marks)

- | | |
|--|----|
| 11 a) Distinguish between incremental and evolutionary process models. Explain spiral model in detail. | 5 |
| b) Explain CMMI model. | 5 |
| 12 a) Explain about software project planning. | 5 |
| b) What is requirements engineering? Explain about elicitation in detail. | 5 |
| 13 a) Explain in detail about the CRC modeling. | 5 |
| b) Explain the design model. | 5 |
| 14 Explain the Golden rules performed in user interface design. | 10 |
| 15 a) Define software testing. Explain alpha and beta testing. | 5 |
| b) Explain the concept of basis-path testing in detail with the help of an example. | 5 |
| 16 a) Explain the metrics for source code. | 5 |
| b) Explain the concept of Debugging. | 5 |
| 17 Write short notes on : | |
| a) Extreme programming | 4 |
| b) Risk Management | 3 |
| c) System testing | 3 |

Code No. 9113

FACULTY OF ENGINEERING

B.E. 3/4 (CSE) I – Semester (Main) Examination, Dec. 2014 / Jan. 2015

Subject: Software Engineering

Time: 3 Hours

Max.Marks: 75

Note: Answer all questions from Part A. Answer any five questions from Part B.

PART – A (25 Marks)

- | | | |
|----|---|---|
| 1 | What are prescriptive process models? List few evolutionary process models. | 2 |
| 2 | What is an agile process? List few agile process models. | 2 |
| 3 | Derive the relation between people and lines of communication in a project. | 3 |
| 4 | List the tasks involved in Requirements Engineering. | 3 |
| 5 | What are the goals of a good design? | 3 |
| 6 | Differentiate analysis and design classes using an example. | 3 |
| 7 | What is the purpose of data design? | 2 |
| 8 | List the golden rules for UI design. | 2 |
| 9 | Differentiate verification and validation. | 3 |
| 10 | List few testing strategies for object-oriented software. | 2 |

PART – B (50 Marks)

- | | | |
|----|---|----|
| 11 | What is an incremental development process? Explain about RAO in detail. | 10 |
| 12 | Explain about COCOMO in detail. | 10 |
| 13 | Explain about the various analysis modelling approaches in detail. | 10 |
| 14 | List the various software architectural styles and explain any three in detail. | 10 |
| 15 | Explain in detail about white box testing along with a Flow Graph Notation example. | 10 |
| 16 | Write short notes on | |
| | a) RUP | 4 |
| | b) Debugging | 3 |
| | c) QFD | 3 |
| 17 | Write short notes on: | |
| | a) Software quality standards | 4 |
| | b) Regression testing | 3 |
| | c) Metrics for maintenance | 3 |

Code No. 6110 / S

FACULTY OF ENGINEERING

B.E. 3/4 (CSE) I – Semester (Supplementary) Examination, July 2014

Subject: Software Engineering

Max.Marks: 75

Time: 3 Hours

Note: Answer all questions from Part A. Answer any five questions from Part B.
PART – A (25 Marks)

- | | | |
|----|---|---|
| 1 | Define process patterns. | 2 |
| 2 | Define team software process. | 2 |
| 3 | List the objectives of planning and managing the software project. | 3 |
| 4 | What are the difficulties faced by a requirements – engineer during requirements elicitation? | 3 |
| 5 | What is quality's role in Design? | 2 |
| 6 | List an advantage and disadvantage of software reuse. | 2 |
| 7 | What is the importance of software architecture? | 2 |
| 8 | List the elements of user interface. | 3 |
| 9 | When is testing complete? | 3 |
| 10 | List few object-oriented test methods. | 3 |

PART – B (50 Marks)

- | | | |
|----|--|----|
| 11 | a) Determine a model to relate process, process assessment, process improvement and capability determination. | 6 |
| | b) List the various kinds of prescriptive process models with examples for each. | 4 |
| 12 | Explain in detail the COCOMO. | 10 |
| 13 | Explain in detail scenario-based modelling. | 10 |
| 14 | "Four different models come into play when a user interface is analyzed and designed". List and explain them in short. | 10 |
| 15 | Explain the debugging process with few debugging strategies. | 10 |
| 16 | Write short notes on the following: | 4 |
| | a) Concurrent Development Model | 3 |
| | b) Project risk management | 3 |
| | c) Purpose of design | |
| 17 | Write short notes on the following: | 4 |
| | a) Independent component architectural style. | 3 |
| | b) Black Box Testing | 3 |
| | c) Elements of framework for product metrics. | |
