

Code No: R20A0511

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution – UGC, Govt. of India)

III B.Tech I Semester Regular Examinations, December 2022**Software Engineering-SET-1****(CSE, IT, CSE-CS, CSE-AIML, CSE-IOT)**

Roll No									
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Time: 3 hours**Max. Marks: 70**

Note: This question paper Consists of 5 Sections. Answer **FIVE** Questions, Choosing **ONE** Question from each **SECTION** and each Question carries 14 marks.

<u>SECTION-I</u>			
1	A	Discuss about failure curves for hardware and software with a neat diagram.	[7M]
	B	Illustrate about generic process framework activities for software engineering.	[7M]
OR			
2	A	Describe about software engineering layers with a neat diagram.	[7M]
	B	Differentiate between waterfall and incremental model.	[7M]
<u>SECTION-II</u>			
3	A	Illustrate about Functional Requirements and Non-functional Requirements.	[7M]
	B	Interpret about the feasibility studies of requirements engineering process.	[7M]
OR			
4	A	Describe about requirements validation and management.	[7M]
	B	Explain about the importance of sequence and activity diagrams in system design.	[7M]
<u>SECTION-III</u>			
5	A	Describe about translating the requirements model into the design model.	[7M]
	B		[7M]
OR			
6	A	Briefly explain about software design concepts.	[7M]
	B	Discuss about the 3 golden rules of performing user interface design.	[7M]
<u>SECTION-IV</u>			
7	A	Analyze about flow graph notation and independent paths with an example	[7M]
	B	Briefly explain about different categories of risks in risk management.	[7M]
OR			
8	A	Describe about graph-based testing methods with an example.	[7M]
	B	Elaborate about RMMM plan in software projects.	[7M]
<u>SECTION-V</u>			
9	A	Discuss about the elements of software quality assurance.	[7M]
	B	Briefly explain about software reliability in software projects.	[7M]
OR			
10	A	Describe about the software quality in software development.	[7M]
	B		[7M]

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III B.Tech I Semester Regular Examinations, December 2022**Software Engineering****(CSE, IT, CSE-CS, CSE-AIML, CSE-IOT)**

Roll No									

Time: 3 hours**Max. Marks: 70**

Note: This question paper Consists of 5 Sections. Answer **FIVE** Questions, Choosing ONE Question from each SECTION and each Question carries 14 marks.

SECTION-I

- 1 A Briefly explain about advantages of prototype model with a neat diagram. [7M]
 B Describe about different types of software myths. [7M]

OR

- 2 A Elaborate about the unified process model with a neat diagram. [7M]
 B Interpret about personal and team process models in software development. [7M]

SECTION-II

- 3 A Illustrate about software requirements document with an example. [7M]
 B Discuss about functional and non-functional requirements with an example. [7M]

OR

- 4 A Describe about structural and behavioral diagrams in uml. [7M]
 B Interpret about requirements elicitation and analysis in requirements engineering process [7M]

SECTION-III

- 5 A Describe architecture in software design. [7M]
 B Outline the different types of architectural styles used in developing a software product. [7M]

OR

- 6 A Briefly explain about importance of data-centered architecture with a neat diagram. [7M]
 B Elaborate about the user interface analysis and design in software development. [7M]

SECTION-IV

- 7 A Analyze about unit testing and integration testing. [7M]
 B Briefly explain about debugging process with a neat diagram. [7M]

OR

- 8 A Describe about black-box testing with an example. [7M]
 B Differentiate between reactive vs proactive risk strategies. [7M]

SECTION-V

- 9 A Discuss about the important activities involved in management of software quality assurance. [7M]
 B Briefly explain about goals attributes and metrics of software quality assurance. [7M]

OR

- 10 A Describe about the measures of reliability and safety in software quality assurance. [7M]
 B Analyze about the iso 9000 quality standards [7M]

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II B.Tech II Semester Supplementary Examinations, December 2022**Software Engineering****(IT)**

Roll No									

Time: 3 hours**Max. Marks: 70****Note:** This question paper Consists of 5 Sections. Answer **FIVE** Questions, Choosing **ONE** Question from each **SECTION** and each Question carries 14 marks.

SECTION - I

1. a) Briefly discuss the advantages and drawbacks of waterfall model. [7M]
b) Explain the basic principle of Prototyping with an example. [7M]
OR
2. a) Discuss the evolving role of software in light of present day software applications. [7M]
b) Express your understanding on the umbrella activities of a software process. [7M]

SECTION – II

3. a) “Non-functional requirements are also essential for customer satisfaction”-Justify this statement with suitable justification. [7M]
b) Write short note on requirements validation process. [7M]
OR
4. a) What are the essential components of SRS document? Explain by taking a simple application of your choice. [7M]
b) Distinguish between functional and non-functional requirements. [7M]

SECTION – III

5. a) What are the golden rules of user interface? Briefly explain. [7M]
b) How can we assess the design quality? Briefly explain. [7M]
OR
6. a) What is the role of software architecture? Describe different software architecture styles.[7M]
b) Write short note on key activities in Object Oriented Design, [7M]

SECTION – IV

7. a) Distinguish between black box and white box testing by taking an example software application of your choice. [7M]
b) How could you achieve 100% testing coverage? Explain. [7M]
OR
8. a) What do you understand by software testing and how can you decide that the testing can be stopped. [7M]
b) “It is always advisable to identify and fix the bug during execution phase”-Justify this statement with suitable justification. [7M]

SECTION – V

9. a) Write short note on RMMM plan. [7M]
b) What are the various categories of risks? Give an overview about Risk Management. [7M]
OR
10. What is the need of Risk Management and explain various activities connected to Risk Management? [14M]

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MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

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II B.Tech II Semester Supplementary Examinations, February 2022**Software Engineering****(IT)**

Roll No									
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Time: 3 hours**Max. Marks: 70****Note:** This question paper Consists of 5 Sections. Answer **FIVE** Questions, Choosing ONE Question from each SECTION and each Question carries 14 marks.

SECTION-I

- 1 a) Explain about process frame work in software engineering. [8M]
b) Explain different applications of software. [6M]

OR

- 2 a) Explain the unified process model with a neat sketch. [10M]
b) Write a short note on extreme programming. [4M]

SECTION-II

- 3 a) Explain about requirements elicitation and analysis. [8M]
b) Explain about system requirements and user requirements. [6M]

OR

- 4 What is a system model? Explain different types of system models. [14M]

SECTION-III

- 5 a) Explain about software architecture with suitable example. [8M]
b) Discuss about data design. [6M]

OR

- 6 a) How can you design user interface? Explain. [8M]
b) Briefly explain object oriented design process. [6M]

SECTION-IV

- 7 a) What do you mean by software testing? Explain about integration testing. [8M]
b) Explain about system testing. [6M]

OR

- 8 a) Explain different software product metrics. [10M]
b) Write a note on software quality factors. [4M]

SECTION-V

- 9 Explain about risk management. [14M]

OR

- 10 a) Explain about CMMI. [7M]
b) What is the need of Software Quality Assurance. [7M]

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II B.Tech II Semester Regular/Supplementary Examinations, July 2021**Software Engineering****(IT)**

Roll No									
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Time: 3 hours**Max. Marks: 70**Answer Any **Five** Questions

All Questions carries equal marks.

- 1 a) Define the term Software Engineering. Describe its various characteristics. [7M]
b) State and explain various types of software myths related to management. [7M]
- 2 a) Explain Waterfall model with a neat diagram. [10M]
b) Write the advantages and disadvantages of waterfall model. [4M]
- 3 a) Explain clearly about software requirements document. [7M]
b) Differentiate between functional and non-functional requirements. [7M]
- 4 Discuss about principal requirements engineering process activities with a neat diagram. [14M]
- 5 Write the taxonomy of architectural styles and give a brief description of each style. [14M]
- 6 a) Explain about user interface design. [8M]
b) Explain the golden rules of user interface design. [6M]
- 7 a) Explain about unit testing considerations and procedures. [7M]
b) Write the differences between black box testing and white box testing. [7M]
- 8 a) Explain about formal technical reviews. [7M]
b) What is RMMM? Explain about RMMM plan. [7M]

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III B.Tech I Semester Regular/Supplementary Examinations, Dec-21/Jan-22**Software Engineering****(CSE)**

Roll No										
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Time: 3 hours**Max. Marks: 70****Note:** This question paper Consists of 5 Sections. Answer **FIVE** Questions, Choosing ONE Question from each SECTION and each Question carries 14 marks.

SECTION-I

- 1 List and explain the following [7M]
a) Activities of generic process framework for software engineering
b) Umbrella activities [7M]

OR

- 2 What is a software myth? Explain the changing nature of the software. [14M]

SECTION-II

- 3 List and explain distinct tasks of requirements engineering [14M]

OR

- 4 Explain the Functional and Non-Functional requirements [14M]

SECTION-III

- 5 What is design process? Explain the characteristics of good design [14M]

OR

- 6 What is software architecture? Why is it so important?. [14M]

SECTION-IV

- 7 What is software testing? Explain unit testing in detail. [14M]

OR

- 8 Explain the metrics for Testing? [14M]

SECTION-V

- 9 Differentiate between Reactive and Proactive risk strategies [14M]

OR

- 10 Define RMMM? Explain RMMM plan in detail [14M]

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution – UGC, Govt. of India)

III B.Tech I Semester Supplementary Examinations, July/August 2021**Software Engineering****(CSE)**

Roll No									
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Time: 3 hours**Max. Marks: 70**

Answer Any **Five** Questions
All Questions carries equal marks.

- 1 a) Discuss about the role of Changing Nature of Software and Software myths in software engineering [7M]
[7M]
b) Explain spiral model with its merits and demerits
- 2 a) Explain in detail about various process models. [7M]
b) What is the role of process assessment in the process framework [7M]
- 3 a) Differentiate between functional and non-functional requirements. [7M]
b) Discuss the various steps in requirement engineering. What are the work products of engineering the requirements? [7M]
- 4 a) Explain the Functional and non-functional requirements in requirement engineering [7M]
[7M]
b) Explain Context Models and Behavioral models with their importance
- 5 a) Define Software architecture. Explain why it may be necessary to design the system architecture before the specifications. Compare function oriented and object oriented designs. [7M]
[7M]
b) What do you mean by the terms cohesion and coupling in the context of software engineering? How are these concepts useful in arriving at a good design of a system explain with example.
- 6 a) Explain the process of mapping dataflow into software architecture. [7M]
b) List the golden rules of user interface design [7M]
- 7 a) What do you mean by risk management? Explain how to select the best risk reduction technique when there are many ways of reducing a risk? [7M]
[7M]
b) Explain about formal technical reviews.
- 8 a) Define software quality assurance .State various SQA activities [7M]
b) What are the main objectives of Software verification and validation? Briefly explain different V and V techniques. [7M]

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II B.Tech II Semester Regular Examinations, October/November 2020**Software Engineering****(IT)**

Roll No										
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Time: 2 hours**Max. Marks: 70**

Answer Any **Four** Questions
All Questions carries equal marks.

- 1 a) Define software engineering and discuss about software myths
b) Illustrate the software process framework
- 2 a) Compare the incremental model and spiral model with neat diagram
b) List out the merits and demerits of waterfall model
- 3 What do you mean by feasibility study? Demonstrate functional and non-functional requirements with suitable examples
- 4 Explain the data models with suitable examples
- 5 a) Explain Golden rules for user interface design
b) Discuss about Software architecture
- 6 Explain in detail about object oriented design process with suitable examples
- 7 a) Illustrate a strategic approach to software testing
b) Explain the concept of Debugging
- 8 What do you mean by SQA and Explain the ISO 9000 Quality Standards

Code No: R18A0511**MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY****(Autonomous Institution – UGC, Govt. of India)****III B.Tech I Semester Supplementary Examinations, June 2022****Software Engineering****(CSE)**

Roll No									
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Time: 3 hours**Max. Marks: 70**

Answer Any **Five** Questions
All Questions carries equal marks.

- 1 With a neat diagram explain the spiral model [14M]
- 2 Explain the phases of unified process model with a diagram [14M]
- 3 Explain the following with respect to requirements validation
a) Different types of checks [7M]
b) Requirements validation techniques [7M]
- 4 Explain in detail about Event-driven and Data-driven modeling [14M]
- 5 Explain object oriented design process using UML [14M]
- 6 Explain the following software architectures
a) Data flow Architecture [7M]
b) Call and Return Architectures [7M]
- 7 Explain black-box and White-box testing [14M]
- 8 Explain Capability Maturity Model Integration (CMMI) in detail [14M]

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II B.Tech II Semester Supplementary Examinations, June 2022**Software Engineering****(IT)**

Roll No									
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Time: 3 hours**Max. Marks: 70**Answer Any **Five** Questions
All Questions carries equal marks.

1. Discuss various phases of waterfall model in detail. **(14M)**
2. a) What is unified process? Discuss its suitability to present day software applications **(7M)**
b) Write short note on various categories of myths connected to software industry. **(7M)**
3. a) What is the use of an Activity diagram and draw an activity diagram for withdrawing money from a Bank ATM. **(7M)**
b) How do you create a process that can manage requirements unpredictability? Explain. **(7M)**
4. a) Draw the sequence diagram for booking an item in an online ecommerce website. **(7M)**
b) Explain software requirements engineering process in brief. **(7M)**
5. a) What are the merits of an Object Oriented Design process? Explain. **(7M)**
b) Write short note on Design concepts. **(7M)**
6. a) What is modularity and write its importance by keeping maximization of cohesion and minimization of coupling as the basis. **(7M)**
b) “Work breakdown structure helps in on time delivery of software products”. Justify this statement. **(7M)**
7. a) Why does software testing need extensive planning? Explain. **(7M)**
b) Write short note on the metrics for software design model. **(7M)**
8. a) Write short note on CMMI and its role in quality improvement. **(7M)**
b) What is the importance of FTR in software quality assurance and write various steps in carrying out FTR. **(7M)**

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(Autonomous Institution – UGC, Govt. of India)**III B.Tech I Semester Supplementary Examinations, November 2022**
Software Engineering
(CSE)

Roll No									
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Time: 3 hours**Max. Marks: 70****Note:** This question paper Consists of 5 Sections. Answer **FIVE** Questions, Choosing ONE Question from each SECTION and each Question carries 14 marks.

SECTION-I

- 1 **A** List the general principles & Process Frame work in software engineering [7M]
 B Compare different types of myths in Software Engineering [7M]

OR

- 2 **A** Discuss in detail about the layers involved in Unified Process model [7M]
 B Sketch and explain Evolutionary model. [7M]

SECTION-II

- 3 **A** Classify different types of Requirements. [4M]
 B Discuss how an engineer responsible for drawing up a system requirements specification might keep track of the relationships between functional and non-functional requirements. [10M]

OR

- 4 **A** What is the main aim of requirement Engineering? Describe its four sub-processes and deliverable of each sub-process? [7M]
 B What is SRS Document? Explain in detail about the structure of a software requirement document [7M]

SECTION-III

- 5 **A** Explain about the various design concepts considered during design? [7M]
 B With a neat diagram, explain various architectural styles & patterns? [7M]

OR

- 6 **A** Explain the following terms with respect to software design: [7M]
 (i) Data design (ii) architectural design with neat Examples
 B Describe the golden rules of User Interface Design [7M]

SECTION-IV

- 7 What is black box testing? Explain the different types of black box testing strategies. Explain by considering suitable examples. [14M]

OR

- 8 **A** Discuss in detail about various software testing strategies. [7M]
 B What are the Various Metrics used for analysis and Design? [7M]

SECTION-V

- 9 **A** Propose RMMM plan for “staff inexperienced” risk while developing a software project [7M]
 B What is the necessity of Quality assurance in Software Engineering? [7M]

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MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

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II B.Tech II Semester Supplementary Examinations, February 2022**Software Engineering****(IT)**

Roll No										
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Time: 3 hours**Max. Marks: 70****Note:** This question paper Consists of 5 Sections. Answer **FIVE** Questions, Choosing ONE Question from each SECTION and each Question carries 14 marks.

SECTION-I

- 1 a) Discuss the evolving role of Software. [8M]
b) What is Team Software Process and list out its objectives? [6M]
OR
- 2 How the waterfall and the prototyping models can be accommodated in the spiral process model. Analyze. [14M]

SECTION-II

- 3 a) What is requirement engineering? State its process and illuminate the requirements of elicitation problem. [8M]
b) Why the customer interaction is a difficult process? Explain one formal procedure used for customer interaction. [6M]
OR
- 4 a) Differentiate between data models and object models with illustration [7M]
b) How do you fit the right prototyping approach in software system models? Explain. [7M]

SECTION-III

- 5 a) Illustrate design quality in the context of design engineering. [7M]
b) How Software architecture is useful in creating an architectural design. [7M]
OR
- 6 Explain about the User interface analysis and design. [14M]

SECTION-IV

- 7 a) Contrast the validation testing with system testing. [7M]
b) Interpret the art of debugging in software testing methodology. [7M]
OR
- 8 Discuss about the Metrics for testing and source code. [14M]

SECTION-V

- 9 a) Illustrate reactive vs. proactive risk strategies in risk management. [7M]
b) How far the risk refinement is useful in risk management. [7M]
OR
- 10 a) Describe the software quality assurance. [7M]
b) Exemplify software reliability. [7M]

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II B.Tech II Semester Supplementary Examinations, July 2021**Software Engineering****(IT)**

Roll No									
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Time: 3 hours**Max. Marks: 70**Answer Any **Five** Questions

All Questions carries equal marks.

- 1 a) What do you mean by Software Myth? Explain Management Myths and Customer Myths. [7M]
b) Explain a generic process framework for software engineering activities. [7M]
- 2 Explain the process areas required to achieve various maturity levels in CMMI. [14M]
- 3 a) Differentiate between functional and non-functional requirements in software engineering. [7M]
b) Explicit effects on software requirement collection? [7M]
- 4 Interpret the Context Models and Behavioural models. [14M]
- 5 a) What is design process and clarify it with respect to design engineering? [7M]
b) Analyse the data design and architectural styles in software engineering process. [7M]
- 6 a) Elucidate in detail about the characteristics and criteria for a good design. [7M]
b) Describe the design procedure for data acquisition system. [7M]
- 7 Why is it so important to include boundary values in your black-box test data? Illustrate with examples in which a test suite developed using black box techniques might give the impression that ‘everything is OK’, while a test suite developed with whit box testing techniques (for example, branch coverage) might uncover a fault and vice versa. [14M]
- 8 a) Deliberate the procedure of formal technical reviews in testing the software. [7M]
b) Identify the importance of the ISO 9000 quality standards in improving software quality. [7M]

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MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

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III B.Tech I Semester Supplementary Examinations, July/August 2021

Software Engineering

(CSE)

Roll No									
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Time: 3 hours

Max. Marks: 70

Answer Any **Five** Questions
All Questions carries equal marks.

- 1** What is CMMMI? Explain in detail about CMMMI. **[14M]**
- 2** Explain spiral model with its merits and demerits. **[14M]**
- 3** Briefly explain the models used for structured analysis. **[14M]**
- 4** Define the term software requirement. Explain different types of software requirements. **[14M]**
- 5** Explain about design concepts. **[14M]**
- 6** What is the need of user interface? Explain user interface design steps. **[14M]**
- 7** Define software testing. Explain different software testing strategies. **[14M]**
- 8** What is the need of software reviews? Explain. **[14M]**

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III B.Tech I Semester Supplementary Examinations, Dec-21/Jan-22**Software Engineering****(CSE)**

Roll No									
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Time: 3 hours**Max. Marks: 70****Note:** This question paper Consists of 5 Sections. Answer **FIVE** Questions, Choosing ONE Question from each SECTION and each Question carries 14 marks.

SECTION-I

- 1 Discuss in detail about the layers involved in Unified Process model. [14M]

OR

- 2 Explain different software myths with respect to management, customer and practitioner with neat case studies. [14M]

SECTION-II

- 3 What is SRS Document. Explain in detail about the structure of a software requirement document. [14M]

OR

- 4 Draw an ER and DFD diagram for university information system. [14M]

SECTION-III

- 5 Draw a translating diagram for analysis model into a software design. Brief about each translations. [14M]

OR

- 6 Discuss the steps involved in effective User interface design. [14M]

SECTION-IV

- 7 Explain control structure testing. What are the different testing techniques involved in it? [14M]

OR

- 8 Explain in detailed about Black-Box and White-Box testing. [14M]

SECTION-V

- 9 Explain software quality assurance? [14M]

OR

- 10 Analyze on the concept of risk projection. [14M]

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Time: 3 hours**Max. Marks: 70**Answer Any **Five** Questions

All Questions carries equal marks.

- 1 a) What do you mean by Software Myth? Explain Management Myths and Customer Myths. [7M]
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- 5 a) What is design process and clarify it with respect to design engineering? [7M]
b) Analyse the data design and architectural styles in software engineering process. [7M]
- 6 a) Elucidate in detail about the characteristics and criteria for a good design. [7M]
b) Describe the design procedure for data acquisition system. [7M]
- 7 Why is it so important to include boundary values in your black-box test data? Illustrate with examples in which a test suite developed using black box techniques might give the impression that ‘everything is OK’, while a test suite developed with whit box testing techniques (for example, branch coverage) might uncover a fault and vice versa. [14M]
- 8 a) Deliberate the procedure of formal technical reviews in testing the software. [7M]
b) Identify the importance of the ISO 9000 quality standards in improving software quality. [7M]
