Code: 20A05403T

R20

B.Tech II Year II Semester (R20) Regular & Supplementary Examinations April/May 2024

SOFTWARE ENGINEERING

(Common to IT, CSE, CSE (IoT), CSE(DS), CS&IT and CSE(CS))

Time: 3 hours Max. Marks: 70

PART – A

(Compulsory Question)

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1		Answer the following: (10 X 02 = 20 Marks)	
	(a)	Draw a diagram for waterfall life cycle model.	2M
	(b)	List any two agile process models.	2M
	(c)	Define software myths.	2M
	(d)	Define software requirements specification.	2M
	(e)	Generalize on the concept of user interface design pattern.	2M
	(f)	What is the difference between mode based and modeless interface?	2M
	(g)	What are generic characteristics of software testing?	2M
	(h)	State the objectives and guidelines for debugging.	2M
	(i)	Define software reverse engineering.	2M
	(j)	What is software reliability?	2M

PART – B

(Answer all the questions: 05 X 10 = 50 Marks)

2	Explain in detail about COCOMO model with suitable example.	10M
	OR	
3	Which process model is best suited for risk management? Discuss with detail an example. Give its advantages and disadvantages.	10M
4	How to handle complex requirements using decision tables and decision trees?	10M
	OR	
5	Explain in detail about axiomatic specification and algebraic specification.	10M
6	Describe the various coupling and cohesion methods used in software design.	10M
	OR	
7	Explain in detail about different types of UML models.	10M
8	Elaborate system testing and path testing with an example.	10M
	OR	
9	What is the main purpose of regression testing? Briefly explain the two main activities of regression testing.	10M
10	Explain in detail about Six sigma.	10M
	OR	
11	Write short note on SEI Capability Maturity Model (CMM).	10M

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Code: 20A05403T

R20

B.Tech II Year II Semester (R20) Regular & Supplementary Examinations August/September 2023

SOFTWARE ENGINEERING

(Common to IT, CSE, CSE (IOT), CSE (DS), and CSE (Cyber Security))

Time: 3 hours Max. Marks: 70

PART – A

(Compulsory Question)

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1		Answer the following: (10 X 02 = 20 Marks)	
	(a)	Distinguish between process and methods.	2M
	(b)	Describe Earned Value Analysis.	2M
	(c)	What do Software Myths mean?	2M
	(d)	Define non-functional requirements with example.	2M
	(e)	Distinguish between good and bad designs.	2M
	(f)	Write about interface design evaluation.	2M
	(g)	What is the purpose of Cyclomatic Complexity?	2M
	(h)	What is meant by debugging?	2M
	(i)	What is the purpose of timeline chart?	2M
	(j)	How the CASE tools are classified?	2M

PART – B

(Answer all the questions: 05 X 10 = 50 Marks)

2	(a)	Explain component based software development model with a neat sketch	5M
	(b)	Describe about agile modeling in detail.	5M
		OR	
3	(a)	Explain in detail about the COCOMO II model for software estimation.	5M
	(b)	Discuss the steps involved in project planning.	5M
4	(a)	What is the purpose of the interaction model for a Web App? Explain.	5M
	(b)	Discuss in detail the method of Requirement elicitation with an example.	5M
		OR	
5		Explain in detail about formal system development techniques.	10M
6	(a)	What is the purpose of data flow diagrams? Draw a level -0 DFD and level-1 DFD for a library management system.	5M
	(b)	Describe the characteristics of good User Interface.	5M
		OR	
7	(a)	Distinguish between Cohesion and Coupling. How do they effect software design?	5M
	(b)	What are different categories of interfaces? Explain.	5M
8	(a)	What do you mean by system testing? Explain in detail.	5M
	(b)	Explain boundary value analysis with example.	5M
		OR	
9	(a)	Explain the testing objectives and its principles.	5M
	(b)	What are the attributes of the good test? Explain the test case design.	5M
10	(a)	Write short notes on ISO 9000 quality standards.	5M
	(b)	Illustrate in detail about Software reverse engineering process.	5M
		OR	
11		Discuss briefly on software maintenance activities and how do you estimate the cost involved.	10M

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