GUJARAT TECHNOLOGICAL UNIVERSITY
BE- SEMESTER–V (NEW) EXAMINATION – WINTER 2020

Subject Code:3150711   **Date:27/01/2021**

Subject Name:Software Engineering

Time:10:30 AM TO 12:30 PM   **Total Marks: 56**

Instructions:
1. Attempt any FOUR questions out of EIGHT questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

Q.1	(a)	Distinguish between a program and a software product.	03
	(b)	Which are the major phases in the waterfall model of software development? Which phase consumes the maximum effort for developing a typical software product?	04
	(c)	With suitable illustration explain SPIRAL model evolutionary software development.	07
Q.2	(a)	What is Agile Manifesto?	03
	(b)	Define the terms: 1) Agility 2) Agile team	04
	(c)	What are the different activities in project planning? What is error tracking?	07
Q.3	(a)	What are the relative advantages of using either the LOC or the function point metric to measure the size of a software product?	03
	(b)	What are the types of metrics?	04
	(c)	What is requirement engineering? State its process and explain requirements elicitation problem.	07
Q.4	(a)	What is the purpose of timeline chart?	03
	(b)	Distinguish between verification & validation.	04
	(c)	Explain with example diagram the functional and behavioral modeling. How do we model the software's reaction to some external event?	07
Q.5	(a)	What are the different levels of abstraction?	03
	(b)	What are the common activities in design process?	04
	(c)	Discuss the differences between black box and white box testing.	07

Q.6	(a)	What are the different types of Cohesion?	**03**
	(b)	What are the various elements of data design?	**04**
	(c)	What do you mean by system testing? Explain in detail.	**07**
Q.7	(a)	What is the Objective of Formal Technical Reviews?	**03**
	(b)	What is DevOps?	**04**
	(c)	Explain Component Based software engineering in detail.	**07**
Q.8	(a)	State the need for software configuration review.	**03**
	(b)	What are the challenges with DevOps implementation?	**04**
	(c)	What is the use of CMM? Discuss different levels of SEI-CMM.	**07**

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