

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-VI (NEW) EXAMINATION – WINTER 2023****Subject Code:3161605****Date:02-12-2023****Subject Name:Software Engineering****Time:02:30 PM TO 05:00 PM****Total Marks:70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Simple and non-programmable scientific calculators are allowed.

		<b>MARKS</b>
<b>Q.1</b>	(a) Explain Software Engineering as a Layered Technology.	<b>03</b>
	(b) Write a short note on Dynamic Systems Development Method (DSDM) in detail.	<b>04</b>
	(c) Explain Function oriented metrics with suitable example.	<b>07</b>
<b>Q.2</b>	(a) Discuss the merits and demerits of SCRUM.	<b>03</b>
	(b) Define requirement engineering. Write functional and non-functional requirement for hotel management system.	<b>04</b>
	(c) Discuss Incremental process model with its diagram and compare it with Waterfall model.	<b>07</b>
<b>OR</b>		
	(c) Write a note on CRC Modeling. Draw and discuss CRC for the “Email System User”.	<b>07</b>
<b>Q.3</b>	(a) Discuss architectural design and also enlist different styles and pattern of architecture.	<b>03</b>
	(b) Compare coupling and cohesion.	<b>04</b>
	(c) What are the different testing strategies? Explain any one of it with suitable example.	<b>07</b>
<b>OR</b>		
<b>Q.3</b>	(a) Explain any one technique to carry out black box testing.	<b>03</b>
	(b) Discuss cyclomatic complexity.	<b>04</b>
	(c) Draw use case diagram and class diagram for hospital management system.	<b>07</b>
<b>Q.4</b>	(a) Explain formal technical review.	<b>03</b>
	(b) List quality standards. Explain any one of it in detail.	<b>04</b>
	(c) Discuss software configuration management in detail.	<b>07</b>
<b>OR</b>		
<b>Q.4</b>	(a) Compare alpha and beta testing.	<b>03</b>
	(b) Define quality for software. List SQA activities. Explain any one activity.	<b>04</b>
	(c) Explain project scheduling process using Gantt chart.	<b>07</b>

- Q.5** (a) Explain the software re-engineering activities. **03**  
(b) Explain software process improvement with various elements of SPI framework. **04**  
(c) What is DevOps? Explain the importance and benefits of DevOps. **07**
- OR**
- Q.5** (a) Write a short note on reverse engineering. **03**  
(b) Explain version and change control management. **04**  
(c) Explain CASE and building blocks of CASE. **07**

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