SOMAIYA VIDYAVIHAR UNIVERSITY

Semester: August 2022 – December 2022 **Maximum Marks: 100** **Examination: ESE Examination** **Duration:3 Hrs.**		
Programme code: _____ **Programme: _____**	**Class:** TY	**Semester:_V_(SVU 2020)**
Name of the Constituent College: **K. J. Somaiya College of Engineering**	**Name of the department: Computers**	
Course Code: 116U01C501	**Name of the Course: Software Engineering**	
Instructions: 1)Draw neat diagrams 2) All questions are compulsory **3) Assume suitable data wherever necessary**		

Que. No.	Question	Max. Marks	CO	BT
Q1	Solve any **Four**	**20**		
i)	Distinguish between RAD and Waterfall Model	5	**CO1**	
ii)	List different types of Agile Process Models	5	**CO1**	
iii)	State advantages and disadvantages of Spiral Model	5	**CO1**	
iv)	Describe EVA in brief.	5	**CO1**	
v)	State various SDLC phases.	5	**CO1**	
vi)	Explain principles of Scheduling in short.	5	**CO1**	

Que. No.	Question	Max. Marks	CO	BT
Q2 A	Solve the following	**10**		
i)	Describe different techniques for requirement elicitation.	5	**CO1 & CO2**	
ii)	State and explain any 5 non-functional requirements.	5	**CO1 & CO2**	
	OR			
Q2 A	Draw a state chart diagram to graphically represent the following system: Consider a bulb with a push down switch. The bulb initially remains off. When the switch is pushed down, the bulb is on. Again when the switch is pushed up, the bulb turns off. The lifecycle of the bulb continues in this way until it gets damaged.	10	**CO1 & CO2**	
Q 2 B	Solve any **One**	**10**		
i)	Explain with suitable example the following: a) Generalization b) Composite Aggregation c) Aggregation d) Association class e) Reflexive Association	10	**CO2**	
ii)	Draw sequence diagram for login procedure of a system. Include all possible scenarios and also draw activity diagram.	10	**CO2**	

Que. No.	Question	Max. Marks	CO	BT
Q3	Solve any **Two**	**20**		
i)	Describe user interface design rules in detail.	10	**CO3**	
ii)	Explain Pattern-Based Software Design.	10	**CO3**	
iii)	State and explain any 5 design concepts in detail	10	**CO3**	

Que. No.	Question	Max. Marks	CO	BT
Q4	Solve any **Two**	**20**		
i)	How to map following associations to code? a) Realization of unidirectional one to one association b) Bidirectional one to one association	10	**CO4 & CO5**	
ii)	Describe elements of Component Diagram with necessary diagram.	10	**CO4 & CO5**	
iii)	Design test case with 5 variations using BVA technique for the following problem definition. The testing of Date field will be done with the given specifications: 1<= mm<= 12 1<= dd <= 31 2009<= yyyy <= 2099	10	**CO4 & CO5**	

Que. No.	Question	Max. Marks	CO	BT
Q5	(Write notes / Short question type) on any **four**	**20**		
i)	Software Maintenance	5	**CO5**	
ii)	Object Oriented Testing Strategies	5	**CO5**	
iii)	Formal Technical Review	5	**CO5**	
iv)	Principles of Testing	5	**CO5**	
v)	Cyclomatic Complexity	5	**CO5**	
vi)	Equivalence Class Partitioning	5	**CO5**	