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RV COLLEGE OF ENGINEERING®

(An Autonomous Institution affiliated to VTU)

V Semester B. E. Examinations March /April 2023

Common to ISE / CSE

SOFTWARE ENGINEERING

Time: 03 Hours ***Maximum Marks: 100***

Instructions to candidates:

1. Answer all questions from Part A. Part A questions should be answered in first three pages of the answer book only.
2. Answer FIVE full questions from Part B. In Part B question number 2, 7 and 8 are compulsory. Answer any one full question from 3 and 4 & one full question from 5 and 6.

PART-A

1	1.1	What are the two kinds of software products?	01
	1.2	What is a prototype?	01
	1.3	Identify the three stages in testing process?	02
	1.4	The two fundamental approaches to requirement elicitation are _____ and _____.	02
	1.5	Mention any four notations for writing systems requirements.	02
	1.6	The _____ model that demonstrates the other systems in the environment of the system being developed.	01
	1.7	The Gang of four defined the four essential elements of design patterns. Which are they?	02
	1.8	The _____ is an approach to software development in which the source code is published and volunteers are invited to participate in development process.	01
	1.9	The dependability of systems is usually more important than their detailed functionality. Give reasons.	02
	1.10	What are the components of a component based software engineering?	02
	1.11	Staff turnover is an example for _____ risk.	01
	1.12	Identify the categories for risk management strategies.	01
	1.13	Suggest an equation for estimations effort in a software project in algorithm modeling.	02

PART-B

2	a	What is $CASE$? Suggest some activities that can be automated using $CASE$. Explain the functional classification of $CASE$.	08
	b	With the help of neat labeled diagram, explain waterfall and incremental models.	08
3	a	What are non-functional requirements? Explain its categories and metrics for its specifications.	08
	b	Draw a sequence diagram for an online shopping scenario and briefly explain it.	08

		OR	
4	a	Draw a class diagram for a library management system. Use and explain the notations used for demonstrating multiplicities and relationships.	08
	b	Explain model driven architecture with MDA transformations.	08
5	a	What are the different levels at which software reuse is possible? Identify the cost associated with reuse.	08
	b	Explain development testing in detail.	08
		OR	
6	a	What is test–driven development? Write any four benefits of using this method.	08
	b	With the help of a diagram, explain the process of acceptance testing.	08
7	a	What are the principal dependability properties? What are the other system properties that are closely related to these fundamental properties?	08
	b	Suggest few advantages of developing a formal specification and using it in a formal development process.	04
	c	Industry has been reluctant to adopt formal methods. Give reasons.	04
8	a	Identify and explain the fundamental project management activities that are common to all organizations.	05
	b	What is a cohesive group? Suggest some benefits of creating such a group.	05
	c	Explain briefly the project planning process with the help of a diagram.	06