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P.E.S. College of Engineering, Mandya - 571 401

(An Autonomous Institution affiliated to VTU, Belagavi)

Fifth Semester, B.E. - Computer Science and Engineering

Semester End Examination; Feb. - 2021

Software Engineering

Time: 3 hrs *Max. Marks: 100*

***Note**: Answer **FIVE** full questions, selecting **ONE** full question from each unit.*

UNIT - I

1	a.	Define software engineering. List and explain essential attributes of good software.	5
	b.	List and explain software engineering code of ethics.	8
	c.	Briefly discuss insulin pump control system with the help of activity model.	7
2	a.	With neat diagram, discuss incremental development model. State two benefits and problems in incremental development model.	8
	b.	With neat block diagram, describe the phases of RUP (Rational Unified Process).	6
	c.	Explain four main activities used in the requirements engineering process.	6

UNIT - II

3	a.	Differentiate between plan-driven and agile specification methods.	6
	b.	List and explain extreme programming practices.	8
	c.	Define SCRUM. With block diagram, discuss the steps involved in SCRUM process.	6
4	a.	Discuss the structure of requirements document as suggested by IEEE standards.	8
	b.	Explain metrics for specifying non-functional requirements.	6
	c.	Discuss briefly the different checks to be carried out during requirement validation process.	6

UNIT - III

5	a.	With example, explain; i) Aggregation ii) Generalization	8
	b.	With the help of state diagram, explain the working of a microwave oven.	8
	c.	What is Model Driven Architecture (MDE)? State three types of abstract models produced in MDE.	4
6	a.	Define architectural pattren. List five essential elements of architectural pattrens used in layered approach.	6
	b.	With suitable diagram, describe the architecture of a language processing system.	10
	c.	List four architectural views.	4

Contd… 2

UNIT - IV

7	a.	Define design pattern. List four essential elements of design pattern.	5
	b.	What is software reuse? State the general models of open source licenses.	5
	c.	State two goals and three levels of granularity in software testing process.	10
8	a.	Define Test Driven Development (TDD). With neat diagram, explain TDD activities along with its benefits.	10
	b.	Explain six stages of acceptance testing process with neat diagram.	10

UNIT - V

9	a.	What is risk management? With neat diagram, discuss risk management process. Also list different type of risks.	10
	b.	Explain the benefits of creating cohesive group.	4
	c.	Give the factors influenced by effectiveness and efficiency of group communication.	6
10	a.	List and explain the terminologies used in configuration management.	10
	b.	Define system release. Describe the factors influencing system release planning.	10

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