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

(An Autonomous Institution affiliated to VTU, Belagavi)

Second Semester, Master of Computer Applications (MCA)

Semester End Examination; October - 2023

Software Engineering

Time: 3 hrs *Max. Marks: 100*

Course Outcomes

The Students will be able to:
CO1: Compare functional and non-functional requirements.
CO2: Analyse different system models in software design.
CO3: Explain component-based software engineering and distributed software engineering.
CO4: Design software engineering concepts to solve the given problem.

Note: I) *Answer any **FIVE** full questions, selecting **ONE** full question from each unit.*
II) *Any **THREE** units will have internal choice and remaining **TWO** unit questions are compulsory.*
III) *Each unit carries 20 marks.*

Q. No.	Questions	Marks	BLs	COs	POs
	UNIT - I	**20**			
1 a.	What is Software Engineering? List and explain the principles of agile methods.	10	L1	CO1	PO1,2
b.	List the Attributes of good software. Illustrate the Reuse-oriented software engineering.	10	L1	CO1	PO2,3
	OR				
d.	Illustrate Boehm's spiral model and also write its advantages and disadvantages.	10	L2,3	CO1	PO1,2,3
e.	List and explain the Extreme programming practices.	10	L1	CO1	PO1,2,3
	UNIT - II	**20**			
2 a.	Explain IEEE (IEEE, 1998) standard the structure of a requirements document.	10	L2	CO2	PO1,2,3
b.	Explain the requirements elicitation and analysis process with suitable diagram.	10	L2	CO2	PO1,2,3
	OR				
d.	With diagram, explain the four principal dimensions to dependability.	10	L2	CO2	PO2,3
e.	List and explain the ways of writing system requirements specification.	10	L1	CO2	PO2,3
	UNIT - III	**20**			
3 a.	Draw the MHC-PMS- (Mental Health Care-Patient Management System) UML activity diagram of Process model of involuntary detention.	10	L3	CO3	PO2,3
b.	Explain the details of Context models and Interaction models.	10	L2	CO3	PO1,2,3
	OR				
d.	Illustrate the state diagram for the weather station system that shows how it responds to requests for various services.	10	L2	CO3	PO2,3
e.	List and explain the Implementation issues in software development.	10	L1	CO3	PO2,3

Contd….2

	UNIT - IV	**20**			
4 a.	Explain the component characteristics of component based software engineering.	10	L2	CO4	PO2,3
b.	List and explain the four critical factors in people management.	10	L1	CO4	PO1,2,3
	UNIT - V	**20**			
5 a.	With suitable example, describe the project scheduling process and also write its diagram.	10	L2	CO5	PO1,2,3
b.	What is Software Testing? Illustrate the acceptance testing process.	10	L1	CO5	PO2,3

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