U.S.N

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

(An Autonomous Institution affiliated to VTU, Belagavi)

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

Semester End Examination; June - 2017

Software Engineering

Time: 3 hrs   *Max. Marks: 100*

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

UNIT - I

1. a.	What are the attributes of good software? Explain.	5
b.	List and explain key challenges faced by software engineering.	5
c.	What is dependability? Explain different dimensions of dependability.	10
2 a.	Explain with block diagram, system engineering process.	10
b.	Explain the following :	
	i) RUP	10
	ii) Evolutionary development process.	

UNIT - II

3 a.	Explain functional and non-functional requirements for any system.	10
b.	With a neat block diagram, explain components of case-tools for structured method support.	10
4 a.	Explain the need for requirements elicitation and analysis. Explain the different process activities involved.	10
b.	For an ATM, identify functional and non-functional requirements.	5
c.	Describe Ethnography.	5

UNIT - III

5 a.	Based on your experience, with a bank ATM, draw a data flow diagram modeling the data processing involved when a customer withdraws each form a machine.	10
b.	Draw and explain the state machine model of a simple microwave oven.	10
6. a	Explain why it is necessary to design the system architecture, what are the system factors affected by the system architecture? Explain.	10
b.	Write the structure of a requirement document suggested by IEEE standard.	5
c.	What is object aggregation? Explain with an example.	5

UNIT - IV

7 a.	List and explain the principle of Agile methods. Also explain the problem with Agile method.	10
b.	Discuss the advantages of pair programming.	5
c.	What are the characteristics of rapid software development?	5

8 a. Define program evaluation dynamics. Discuss the Lehman laws for program evaluation dynamics. 10

b. What is software prototyping? Give benefits of software prototyping. 5

c. Explain the characteristics of clean room software development. 5

UNIT - V

9 a. Explain the various inspection rates and inspection checklists for software inspection process. 10

b. What is partition testing? Identify equivalence class partitions for automated air conditioning system having at least four partitions. List also boundary value for each class. 10

10a. Explain Maslow's human needs hierarchy of motivating people. 10

b. What are the factors affecting software pricing? What are the two types of metrics used? Explain. 10

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