U.S.N | | | | | | | | | | |

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; Dec. - 2019

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. Explain essential attributes of good software.	6
b.	List and explain any five software engineering code of ethics.	6
c.	With the help of neat diagram, discuss Insulin pump control system.	8
2 a.	Write a block diagram for illustrating incremental development model. Also state at least two benefits and the problems in incremental development.	10
b.	List four basic process activities used in software development process. Also with neat diagram, discuss briefly requirements engineering process.	10

UNIT - II

3 a.	Explain plan driven and agile development methods.	6
b.	Describe the principles of agile methods.	6
c.	List and describe extreme programming practices.	8
4 a.	Define Non-functional requirements and the metrics used for specifying non-functional requirements.	6
b.	Write and explain the structure of requirement document as suggested by IEEE.	8
c.	Briefly discuss the different checks to be carried out during requirements validation process.	6

UNIT - III

5 a.	Explain the following terms with suitable examples: i) Generalization ii) Aggregation	6
b.	Draw state diagram of microwave oven, also list states and stimulus for the same.	10
c.	What is model driven engineering. State types of abstract system models produced by model driven engineering.	4
6 a.	Define architectural design. Illustrate layered architecture with an example.	8
b.	With a neat diagram describe different types of architectural views.	6
c.	With the diagram, explain repository architecture for a language processing system.	6

Contd…2

UNIT - IV

7 a.	Define design pattern. Explain the four elements of design patterns.	8
b.	What is software reuse? State the general models of open source licenses.	6
c.	List three different types of user testing with relevant example.	6
8 a.	Define Test Driven Development (TDD) and with neat diagram describe TDD activities along with its benefits.	10
b.	With neat diagram, briefly describe the six stages in the acceptance testing process.	10

UNIT - V

9 a.	List and explain terminologies used in configuration management.	10
b.	With neat diagram, briefly describe continuous integration in system building.	10
10 a.	List the advantages of group cohesiveness.	4
b.	Briefly discuss the effectiveness and efficiency of communications that are influenced by group communication.	10
c.	Write different types of risk indicators used in risk monitoring.	6

* * *