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

(An Autonomous Institution affiliated to VTU, Belagavi)

Third Semester, Master of Computer Applications (MCA)

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

1a. What do you mean by software engineering? List and describe the attributes of good software. 10

b. What is software process model? Explain waterfall and incremental development models with neat diagrams. 10

2a. Along with figure, explain the activities in the requirement engineering process. 10

b. List and explain the principle of Agile methods. 5

c. Describe the practices involved in extreme programming. 5

UNIT - II

3a. Discuss various types of non-functional requirements. Also list the metrics for specifying non-functional requirements. 10

b. Give the chapter wise description of a requirement document. 10

4a. Explain spiral model of requirement engineering process. 10

b. Describe the four properties of dependability. 10

UNIT - III

5a. With suitable example, explain; 10

i) Use case model ii) Sequence model

b. What are data–driven and event–driven models? Discuss with an example for each. 10

6a. What are architectural patterns? Considering web application architecture, explain MVC pattern. 10

b. Explain two types of UML design models. 10

UNIT - IV

7a. With a neat figure, discuss the two types of CBSE processes. 10

b. List five architectural styles for distributed systems. Explain any one of them. 10

8a. Explain human needs hierarchy with reference to motivating people. 10

b. List and explain the factors that influence the effectiveness of group communications. 10

UNIT - V

9a. Discuss the project planning process with a diagram. 10

b. Write a note on COCOMO estimation models. 10

10a. Explain a model for software testing process. 10

b. Discuss the stages of acceptance testing process. 10

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