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13MCA33

Third Semester MCA Degree Examination, Dec.2016/Jan.2017
Software Engineering

Time: 3 hrs. Max. Marks:100

Note: *Answer any FIVE full questions.*

1 a. What are the attributes of good software? **(08 Marks)**
b. What are the key challenges faced by software engineer? Explain. **(06 Marks)**
c. Explain the professional responsibilities of a software engineer. **(06 Marks)**

2 a. Explain the principles of agile methods. **(06 Marks)**
b. Discuss rational unified process with a neat diagram. **(06 Marks)**
c. Explain waterfall model with its merits and demerits. **(08 Marks)**

3 a. Discuss requirement engineering process with a neat diagram. **(07 Marks)**
b. Explain requirements elicitation and analysis process. **(07 Marks)**
c. What are the requirements validation techniques? Explain briefly. **(06 Marks)**

4 a. Explain system models with suitable examples. **(10 Marks)**
b. What is architectural design? Explain the repository model and client-server model with an example for each. **(10 Marks)**

5 a. Explain basic elements of a component model with a neat diagram. **(12 Marks)**
b. List out the advantages and disadvantages of using a distributed approach to systems development. **(08 Marks)**

6 a. Differentiate between black box testing and white box testing. **(08 Marks)**
b. Name the various estimation techniques in software systems. **(06 Marks)**
c. Discuss project scheduling and staffing. **(06 Marks)**

7 a. Explain risk management process with a neat diagram. **(08 Marks)**
b. Explain functional and non-functional requirements. **(04 Marks)**
c. What are the practices followed in extreme programming? **(08 Marks)**

8 Briefly explain the following:
a. CBSE process.
b. Data flow diagram of an ATM.
c. Software as a service.
d. Function oriented design. **(20 Marks)**

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