Third Semester MCA Degree Examination, June/July 2017
Software Engineering

Time: 3 hrs.   Max. Marks:100

Note: *Answer any FIVE full questions.*

1   a. What is software engineering? What are the fundamental software engineering activities?
                                                                        (07 Marks)
    b. What are the professional and ethical responsibilities of a software engineer?   **(07 Marks)**
    c. What are the general issues that affect many different types of software?   **(06 Marks)**

2   a. Define software process model. Explain waterfall model.   **(10 Marks)**
    b. With the relevant diagram, explain the four basic process activities.   **(10 Marks)**

3   a. What are functional and non – functional requirements?   **(06 Marks)**
    b. Explain the ways of writing system requirements specification.   **(06 Marks)**
    c. Explain the process of requirement and elicitation and analyses process, with a suitable diagram.   **(08 Marks)**

4   a. What is system modelling? Explain each UML diagram, with a diagram used to represent the essentials of a system.   **(12 Marks)**
    b. Draw and explain sequence diagram for a typical weather station.   **(08 Marks)**

5   a. What are the essentials of component based software engineering?   **(06 Marks)**
    b. Define component model. With a diagram, explain the basic elements of a component model.   **(10 Marks)**
    c. Mention the categories of component model implementation services.   **(04 Marks)**

6   a. Explain the advantages of using distributed approach to system development.   **(10 Marks)**
    b. Write short note on :
        i)   Middle ware
        ii) Client server computing.   **(10 Marks)**

7   a. Explain the major issues of project planning.   **(10 Marks)**
    b. What is risk management? Explain the risk management process with a diagram.   **(10 Marks)**

8   a. What is software testing? Explain the fundamental of testing.   **(10 Marks)**
    b. Write short notes on :
        i)   Levels of testing
        ii) Black – box testing   **(10 Marks)**

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