INSTITUTE OF AERONAUTICAL ENGINEERING
(Autonomous)

B.Tech IV Semester End Examinations (Regular / Supplementary) - May, 2019

Regulation: IARE – R16

SOFTWARE ENGINEERING

Time: 3 Hours   (IT)   Max Marks: 70

Answer ONE Question from each Unit
All Questions Carry Equal Marks
All parts of the question must be answered in one place only

UNIT – I

1. (a) Define software engineering. Explain about the characteristics of software and its application domains. **[7M]**

   (b) Differentiate between waterfall and incremental process models. Discuss in detail about LOC based estimation with a suitable example. **[7M]**

2. (a) Elaborate the concept of earned value analysis with effect to project scheduling. Discuss the importance of project scheduling. **[7M]**

   (b) What is project management? List and explain the principles related to software project management. **[7M]**

UNIT – II

3. (a) Explain how to manage changing requirements during the requirements elicitation process? **[7M]**

   (b) List the characteristics of good SRS document and their components. **[7M]**

4. (a) Discuss various non-functional requirements with suitable examples. Differentiate between functional and non-functional requirements. **[7M]**

   (b) Discuss various requirements elicitation and analysis methods with suitable examples. **[7M]**

UNIT – III

5. (a) Discuss the importance of design and various design concepts used in software product developement. **[7M]**

   (b) Explain about user interface design. Discuss various architectural styles with suitable example. **[7M]**

6. (a) Describe the various coupling and cohesion methods used in software design. **[7M]**

   (b) Analyze about program design language in designing conventional components. **[7M]**

UNIT – IV

7. (a) Define software testing. List the fundamentals of software testing process. **[7M]**

   (b) Differentiate between testing and debugging process. Explain basis path testing with an example. **[7M]**

8. (a) Differentiate between white box and black box testing methods.Write about regression testing. **[7M]**

   (b) Distinguish between top-down and bottom-up integration testing methods. Discuss the role of validation testing with examples. **[7M]**

UNIT – V

9. (a) Define risk management. Discuss about various types of software risks identified during software development. **[7M]**

   (b) Compare and contrast between proactive and reactive risks with suitable examples. Discuss the need of risk identification. **[7M]**

10. (a) Discuss the process of functional point analysis with sample cases for components of different complexity. **[7M]**

    (b) Outline the importance of "project scheduling", explain about COCOMO-II model in detail. **[7M]**

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