INSTITUTE OF AERONAUTICAL ENGINEERING
(Autonomous)

B.Tech VI Semester End Examinations (Regular) - May, 2019

Regulation: IARE – R16

SOFTWARE DEVELOPMENT METHODOLOGY

Time: 3 Hours   (CSE)   **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) What is legacy software? Specify its role and impact in software engineering. **[7M]**

   (b) Elaborate the essential activities in engineering phase of Unified process. **[7M]**

2. (a) Write detailed notes on CMMI. Explain software myth? Discuss on various types of software myths and the true aspects of these myths **[7M]**

   (b) Discuss Waterfall model with suitable diagram. Mention its advantages and advantages. **[7M]**

UNIT – II

3. (a) Mention the process of requirements engineering with a spiral model. **[7M]**

   (b) Prepare a Software Requirement Specification document in IEEE format for ATM application. Design a usecase model for the same. **[7M]**

4. (a) Give the measures to validate the requirements of software system. **[7M]**

   (b) Define ethnography. Specify the process of grabbing requirements out of ethnography with a neat diagram. **[7M]**

UNIT – III

5. (a) Explain about the various design concepts considered during design. Discuss the characteristics of good design. **[7M]**

   (b) Write about "cohesion" and "coupling" in the context of software engineering? How are these concepts useful in arriving at a good design of a system? **[7M]**

6. (a) Explain in detail about types of design classes. Demonstrate the importance of user analysis. **[7M]**

   (b) Compare and contrast Component level design elements with deployment level design elements with suitable diagrams and examples. **[7M]**

UNIT – IV

7. (a) Define various debugging strategies. With a neat sketch, explain the art of debugging. **[7M]**

   (b) Specify the differences between glass box and behavioural testing. **[7M]**

8. (a) Define metric. Elaborate the metrics for source code & maintenance. **[7M]**

   (b) Explain the testing strategies for conventional software. **[7M]**

UNIT – V

9. (a) Explain the concept of Risk Identification. Explain in detail about Reactive versus Proactive Risk Strategies **[7M]**

   (b) How do we assess overall project risks? Explain the process of integrating metrics within the software process **[7M]**

10. (a) What is software quality assurance? List out all the activities of it. **[7M]**

    (b) What is a walkthrough? Draw and explain defect amplification model. **[7M]**

$$- \circ \circ \bigcirc \circ \circ -$$