Hall Ticket No | | | | | | | | | | | Question Paper Code: AITB26

INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)
Dundigal-500043, Hyderabad

B.Tech VII SEMESTER END EXAMINATIONS (REGULAR) - FEBRUARY 2022
Regulation: R18
SOFTWARE ENGINEERING

Time: 3 Hours **(CSE|IT)** **Max Marks: 70**

Answer FIVE Questions choosing ONE question from each module
(NOTE: Provision is given to answer TWO questions from any ONE module)
All Questions Carry Equal Marks
All parts of the question must be answered in one place only

MODULE – I

1. (a) Relate about waterfall model and incremental model with a neat diagram. **[7M]**
   (b) Write about software engineering. Discuss about basic principles of software project scheduling **[7M]**

2. (a) Explain briefly about
   i) Concurrent based development model.
   ii) Aspect oriented software development model
   iii) Component based development model. **[7M]**
   (b) Elaborate on evolution of software. Give the comparison of software development and software system product. **[7M]**

MODULE – II

3. (a) Illustrate about user requirements and system requirements with an example. **[7M]**
   (b) Describe the structure of requirements document and possible users of documents and how they use it? **[7M]**

4. (a) What are the non-functional requirements of software? Discuss about the activities involved in requirements engineering process. **[7M]**
   (b) Explain the software requirement analysis and modeling. Differentiate data-oriented requirements analysis and object-oriented requirement analysis. **[7M]**

MODULE – III

5. (a) List the fundamentals of software design concepts. Discuss the importance of architecture in software design. **[7M]**
   (b) Write short notes on cohesion. Describe about the goals of interface analysis to design a system. **[7M]**

6. (a) Illustrate the functionality of coupling and cohesion in designing a class-based components. **[7M]**
   (b) Explain the importance of data abstraction and encapsulation in object-oriented design. **[7M]**

MODULE – IV

7. (a) Describe the functionality of white-box testing in software development. List the differences between black box testing and white box testing. **[7M]**

   (b) List the importance of refactoring technique in software implementation. Discuss the role of validation testing in software development. **[7M]**

8. (a) Illustrate the role of debugging process in software testing with a neat diagram. **[7M]**

   (b) Why testing is important with respect to software? Explain the different levels of testing. **[7M]**

MODULE – V

9. (a) Interpret the different categories of risks in software development. Discuss the importance of project scheduling. **[7M]**

   (b) Briefly explain about the RMMM plan. Articulate the process metrics and software process improvement. **[7M]**

10. (a) What are software metrics and measurements? Differentiate function-oriented metrics and size-oriented metrics. **[7M]**

    (b) Write briefly about the following i) Risk mitigation ii) Monitoring and management iv) COCOMO II model

    [7M]

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