

BACHELOR OF TECHNOLOGY (CBCS) (2021-COURSE)
B. Tech. Sem - V Computer Science & Engineering-A&M : WINTER : 2023
SUBJECT : ITC-III: SOFTWARE ENGINEERING

Day : Monday

Time : 02:30 PM-05:30 PM

Date : 04-12-2023

W-23959-2023

Max. Marks : 60

N. B. :

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Draw neat and labelled diagrams **WHEREVER** necessary.
- 4) Assume suitable data, if necessary.

Q. 1 What factors contribute to the costs associated with software engineering projects and how can these costs be managed effectively? (10)

OR

Q. 1 How does the software engineering process incorporate design, development, testing and maintenance phases? (10)

Q. 2 What are the key phases of the Waterfall model and when is it most suitable for software development projects? (10)

OR

Q. 2 What are the characteristics of Rapid Software Development and under what circumstances is it most suitable? (10)

Q. 3 Explain the concept of feasibility analysis in the context of software requirement analysis and specification. What are the key aspects considered in feasibility studies? (10)

OR

Q. 3 Explain the concept of use cases in the context of requirement analysis. How do they help in capturing and documenting requirements? (10)

Q. 4 Why is functional independence crucial in designing software components, and how does it contribute to code maintainability? (10)

OR

Q. 4 What are some common design issues that can arise in the development of modern Graphical User Interfaces (GUIs) and how can they be addressed? (10)

Q. 5 Compare and contrast black-box and white-box testing approaches. When would you recommend using one over the other and what consideration should be taken into account? (10)

OR

Q. 5 Explain the key quality management activities that are typically performed throughout the software development process. How do these activities contribute to overall product quality? (10)

Q. 6 What are the core principles of Agile software development and why are they important in modern software engineering? (10)

OR

Q. 6 How does micro services architecture impact scalability and fault tolerance in web applications? (10)

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