

**BACHELOR OF TECHNOLOGY (CBCS - 2023)**  
**B. Tech. Sem-IV INFORMATION TECHNOLOGY : SUMMER : 2025**  
**SUBJECT: SOFTWARE ENGINEERING**

Day : Friday  
Date : 23/05/2025

S-29317-2025

Time : 10:00 AM-01:00 PM  
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** Discuss Extreme Programming in detail. Enlist its principles, core practices. (10)  
Explain the process of Extreme Programming.

**OR**

**Q. 1** Define Software Engineering. Enlist key challenges of software engineering. (10)  
Differentiate between software engineering and system engineering.

**Q. 2** Enlist and explain different requirement elicitation techniques in detail. (10)

**OR**

**Q. 2** Discuss Data flow diagram. Explain the difference between logical and (10)  
physical DFDs with appropriate example.

**Q. 3** Define and differentiate cohesion and coupling and why are they important in (10)  
modular software design.

**OR**

**Q. 3** Define class diagram and use case diagram. Draw class diagram and use case (10)  
diagram for College Management System.

**Q. 4** Enlist and explain key elements of Software Configuration Management. What (10)  
is the role of baseline and software configuration items in configuration  
management?

**OR**

**Q. 4** Discuss continuous integration and explain its benefits and role in agile or (10)  
DevOps environment.

**Q. 5** Explain the importance of coding practices in software development. Discuss (10)  
how it helps improve code quality, maintainability and performance.

**OR**

**Q. 5** Define software testing. Enlist and explain level of testing with suitable (10)  
example.

**Q. 6** Discuss capability maturity model integration (CMMI) and how it assist in (10)  
improving software processes.

**OR**

**Q. 6** Define the term software quality. Discuss key concept and attributes that define (10)  
software quality. How do these attributes impact the development process?

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