Roll No: | | | | | | | | | | | | |

BTECH
(SEM VI) THEORY EXAMINATION 2023-24
SOFTWARE ENGINEERING

TIME: 3 HRS   **M.MARKS: 100**

Note: **1.** Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. **Attempt *all* questions in brief.**

a.	Define the term Software Engineering.	02
b.	Discuss the various characteristics of a software.	02
c.	Explain the need of an SRS.	02
d.	Explain stubs and drivers.	02
e.	Discuss LOC? List two advantages and disadvantages of LOC.	02
f.	What is Pseudo Code? How it differs from Algorithm?	02
g.	Describe the importance of white box testing.	02
h.	Explain Error, Fault and Failure.	02
i.	List any two reasons for increase in the software costs.	02
j.	Discuss the need of Risk Management in software engineering.	02

SECTION B

2. **Attempt any *three* of the following:**

a.	Illustrate the statement "Software engineering is layered technology".	10
b.	Discuss the importance of Feasibility Study. Also discuss its various types.	10
c.	Explain Code Inspection, Formal Technical Reviews (Peer Reviews) and Walk Through in detail.	10
d.	Write a short note on: Mutation testing Alpha & Beta testing Regression testing	10
e.	What do you mean by the term software re-engineering? Why is it required?	10

SECTION C

3. **Attempt any *one* part of the following:**

a.	Explain Software Quality Attributes in detail	10
b.	Explain SDLC. Also discuss various activities during SDLC.	10

4. **Attempt any *one* part of the following:**

a.	Explain Requirement Elicitation techniques in detail.	10
b.	Compare SEI CMM Model and ISO 9000 Model. Also discuss five levels of CMM.	10

5. **Attempt any *one* part of the following:**

a.	Explain the term Cohesion and Coupling? Also explain the various forms of cohesion and coupling?	10
b.	Explain software metric? Also explain the various metrics for the size estimation of a project.	10

6. **Attempt any *one* part of the following:**

a.	A program reads an integer number within the range [1,100] and determines whether it is a prime number or not. Design test cases for this program using BVC, robust testing, and worst-case testing methods.	10
b.	What is Integration Testing? Explain different approaches used for integration testing.	10

7. **Attempt any *one* part of the following:**

a.	Discuss the need of maintenance. Also discuss various categories of maintenance.	10
b.	Discuss COCOMO model in detail. Also explain the term Person Month (PM).	10