Paper ID : 250555

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

BTECH
(SEM VI) THEORY EXAMINATION 2024-25
SOFTWARE ENGINEERING

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

Note: Attempt all Sections. In case of any missing data; choose suitably.

SECTION A

1. Attempt *all* questions in brief. **2 x 10 = 20**

Q No.	Question	CO	Level
a.	Define software crisis.	1	K1
b.	Enlist characteristics of software.	1	K1
c.	Discuss various phases of software design.	2	K2
d.	Differentiate between software metric and software measurement.	2	K2,K3
e.	Explain benefits and limitations of CASE tools.	2	K2
f.	List five desirable characteristics of good SRS document.	1	K1
g.	Differentiate between alpha and beta testing.	2	K2
h.	List the advantages and disadvantages of ER diagram.	1	K1
i.	Define adaptive maintenance.	1	K1
j.	Explain stubs and drivers.	2	K2

SECTION B

2. Attempt any *three* of the following: **10 x 3 = 30**

Q No.	Question	CO	Level
a.	Explain SDLC and also discuss various activities during SDLC	2	K2
b.	Explain top-down and bottom-up approach in software design.	2	K2
c.	Define term software engineering and discuss various characteristics of software with example.	1	K1
d.	Develop a level-2 DFD for library management system.	3	K3
e.	Explain software re-engineering and the steps involved in re-engineering process.	2	K2

SECTION C

3. Attempt any *one* part of the following: **10 x 1 = 10**

Q No.	Question	CO	Level
a.	What is cyclomatic complexity in software engineering? Explain how it is calculated and discuss its significance in software testing and maintenance. Illustrate your answer with a control flow graph and an example.	4	K2,K3
b.	Demonstrate the PERT and CPM techniques used in project management. Illustrate their benefits and limitations. Support your answer with suitable examples.	4	K3

Paper ID : 250555

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

BTECH
(SEM VI) THEORY EXAMINATION 2024-25
SOFTWARE ENGINEERING

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

4. Attempt any *one* part of the following: 10 x 1 = 10

Q No.	Question	CO	Level
a.	Discuss significance of requirement engineering. Also write the various steps of requirement engineering with explanation.	2	K2
b.	Describe the following: i) Formal Technical Review ii) Walkthrough iii) Code inspection	2	K2

5. Attempt any *one* part of the following: 10 x 1 = 10

Q No.	Question	CO	Level
a.	Define cohesion and coupling in the context of software design. Explain the different types of cohesion and coupling with suitable examples. Identify why high cohesion and low coupling are desirable in software systems.	3	K2,K3
b.	Explain risk management. Identify how project risks different from technical risk?	3	K2,K3

6. Attempt any *one* part of the following: 10 x 1 = 10

Q No.	Question	CO	Level
a.	Define software testing. Explain its importance in the software development life cycle (SDLC). Discuss the different levels of software testing with suitable examples.	2	K1,K2
b.	Explain waterfall model and write the advantages and disadvantages of waterfall model.	2	K2

7. Attempt any *one* part of the following: 10 x 1 = 10

Q No.	Question	CO	Level
a.	Explain Software Quality Assurance with life cycle.	2	K2
b.	Describe the objectives of software testing and discuss the purpose of integration testing. Also, explain the process of integration testing.	2	K3