

JK Lakshmipat University, Jaipur
INSTITUTE OF ENGINEERING AND TECHNOLOGY
End Term Examination, April 2024
BTech CSE, Semester VI

Subject: Software Engineering (CS1113)

Time: 2:30 hours

Roll No.....

Max. Marks: 30

Instructions to students:

1. Do not write anything other than your roll number on the question paper.
2. Assume suitable data wherever required and mention it clearly.

Q. 1	Perform the Requirement Engineering Process, Analysis and Design for the following Problem Statement and draw the: • Context Diagram • Data Flow Diagram • ER-Diagram • Use Case Diagrams • Activity Diagrams • Class Diagrams. Problem Statement: Design and develop an online food ordering system that enables customers to browse restaurant menus, place orders, and track deliveries efficiently, while providing restaurant owners with tools to manage orders, update menus, and track sales. The system should support multiple restaurants and users concurrently, handle various types of orders (e.g., dine-in, takeout, delivery), and integrate with payment gateways for secure transactions. Additionally, the system should prioritize user experience, ensuring intuitive navigation, responsive design, and personalized recommendations based on user preferences. The goal is to create a seamless and enjoyable online food ordering experience for both customers and restaurant owners, ultimately driving customer satisfaction and business growth.	18 CO 1-7
Q. 2	A Software project was estimated at 886 Function Points. A six-person team will be assigned to the project consisting of a requirement gathering person, one designer, two programmers and two testers. The salary of the designer is Rs. 85,000 per month, requirement gatherer is Rs. 60,000 per month, programmer is Rs. 80,000 per month and a tester is Rs. 70,000 per month. Average productivity for the team is 12 FP per person month. What will be the projected cost of the project?	03 CO8
Q. 3	An Operating System (OS) crashes on average once in 25 days, that is, the Mean Time Between Failures (MTBF) = 25 days. When this happens, it takes 8 minutes to recover the OS, that is, the Mean Time to Repair (MTTR) = 8 minutes. The availability of the OS with this reliability will be approximately?	03 CO9
Q. 4	Eighty (80) reusable components were available for an application. If only 85% of these components can be used, the rest 15% would have to be developed from scratch. If the average component is 120 LOC and cost of each LOC is Rs 150, what will be the risk exposure if risk probability is 75%?	03 CO9

Q. 5 Identify the ambiguity or gaps in roles and responsibilities in the following RASCI Matrix and also find out some specific roles of the given stakeholders.

03
CO1

	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	S13	S14	S15
T1	R	I	R	S		C	S	I	R	A	C	R		I	S
T2	S	R	A	S	R	C	S	R			C			R	S
T3		C	R					R		A	C				R
T4	R	S	R		S	C	R	S	I	I	C	R		R	S
T5	R	C	A	S	S	I	C	C	R	C	C	I		R	S
T6	C		R	S	S	R		S	A	I		S		S	A
T7	C	R		S			R	I	S	C				A	S
T8	I	I	R	S	S	R	S	A	S		C	R		C	S
T9	C		I	S		C	S	C	I	A		C		I	S
T10	S	R	C	S	C	I	S	R	I	A	C	S		I	I