JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -2 EXAMINATIONS- 2025

B.Tech-Vth Semester (CSE/IT)

COURSE CODE (CREDITS): 18B17CI572 (3)　　　　MAX. MARKS: 25

COURSE NAME: INFORMATION SYSTEMS

COURSE INSTRUCTORS: Dr. Ruchi Verma　　　　MAX. TIME: 1 Hour 30 Min

Note: *(a) All questions are compulsory.*

(b) The candidate is allowed to make Suitable numeric assumptions wherever required

for solving problems

Q.No	Question	CO	Marks
Q1	Computer-Mediated Communities have transformed how knowledge is created, validated and shared across digital ecosystems. Considering an enterprise knowledge management system , that integrates an internal CMC for employees, critically evaluate how within an organization socio-technical factors influence: (a) knowledge retention (b) trust formation (c) innovation diffusion Propose a framework which is grounded in Information Systems theory to measure the community's long-term effectiveness.	C02	5
Q2	Critically analyze two systemic risks that emerge when Digital Natives engage with digital platforms primarily at the interface level without understanding the underlying computational, network, or data governance mechanisms. Discuss how these risks can compromise organizational cyber security resilience and ethical data handling within Information Systems	CO4	5
Q3	The spiral approach to prototyping combines iterative development with risk management and user feedback loops. Critically evaluate how the spiral model enhances both efficiency and effectiveness in achieving organizational objectives. Illustrate your answer with an example showing how successive prototypes contribute to improved system performance, user satisfaction and decision support.	CO3	5
Q4	Implement a Java Servlet that performs the following tasks: 1. Connects to a relational database 2. Accepts user input from an HTML form 3. Executes a parameterized SQL query to retrieve all employees in that department. 4. Displays the results dynamically in a formatted HTML table	CO2	5

	5. Implements exception handling and ensures resources are closed properly			
Q5	A mid-sized enterprise launches an Enterprise Resource Planning project to unify its finance, HR, and supply chain operations. After a year, the project faces budget overruns, poor user adoption, and data integration errors across departments. Analyze three key factors that likely contributed to the project's failure, and propose how the structured use of Information Systems Development Methodologies could have mitigated each of these risks.	CO2	5