JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

Make-up Examination-Nov-2025

COURSE CODE (CREDITS): 18B11CI512(3)

COURSE NAME: INFORMATION SYSTEMS

COURSE INSTRUCTORS: DR. RUCHI VERMA

MAX. MARKS: 25

MAX. TIME: 1 Hour 30 Minutes

Note: 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	In a large multinational enterprise using a cloud-based Knowledge Management System , online discussion boards and AI-driven suggestion engines form the core of its Computer-Mediated Communities . Critically analyze how socio-technical factors affect: (a) knowledge creation and sharing, (b) community engagement and motivation, and (c) organizational memory sustainability. Propose a conceptual model to assess the long-term evolution and maturity of such communities.	CO1	5
Q2	Digital natives often operate within platform ecosystems, without a deep understanding of backend logic, APIs, or data ethics. Identify and explain two systemic risks arising from this surface-level interaction. Discuss how these risks could undermine: (a) data privacy compliance, and (b) cybersecurity integrity within enterprise Information Systems. Support your answer with examples.	CO2	5
Q3	Design and implement a Java Servlet that performs the following: 1. Establishes a database connection using JNDI and connection pooling. 2. Accepts user input from an HTML form . 3. Executes a JOIN query using Prepared Statement. 4. Displays results in a structured Bootstrap-styled HTML table. 5. Provide comments explaining how this servlet adheres to MVC principles in web application design	CO3	5
Q4	The Agile–Spiral hybrid model has been increasingly adopted for enterprise-scale Information Systems projects that demand both flexibility and reliability. Critically evaluate how integrating iterative prototyping with continuous user validation improves system adaptability, stakeholder confidence, and time-to-value. Support your argument with a case-based example showing how successive	CO2	5

	iterations refined decision-support capabilities or user satisfaction in an IS deployment.		
Q5	From a Human Computer Interaction perspective, design two interventions that simultaneously: (a) improve user interface accessibility, and (b) foster user awareness of underlying algorithmic behavior. You may reference adaptive interfaces, explainable recommendation systems, or augmented reality learning tools to demonstrate how IS design can enhance both usability and computational literacy.	CO3	5