

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATION- 2024

B.Tech-Vth Semester (IT/BI)

COURSE CODE(CREDITS): 18B11CI512(3)

MAX. MARKS: 15

COURSE NAME: INFORMATION SYSTEMS

COURSE INSTRUCTORS: DR. RUCHI VERMA

MAX. TIME: 1 Hour

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

(b) Marks are indicated against each question in square brackets.

(c) The candidate is allowed to make Suitable numeric assumptions wherever required for solving problems

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Q1. ABC Hospital Chain is required to address the inefficiencies and errors associated with manual patient record keeping, appointment scheduling and billing processes in the hospitals. Design a Model-View-Controller architecture for developing a centralized, user-friendly software allowing streamlined data access and improved communication between healthcare staff and enhanced patient care coordination. (4.0 marks CO-2)

Q2. Complex Transaction Processing Systems in New York Stock Exchange (NYSE) facilitate trades by ensuring order matching between buyers and sellers, updating stock prices based on transactions and electronically settling trades in real time. Implement the transaction demarcation, transaction context and propagation and transaction monitor for this transaction processing system. (4.0 marks CO-1)

Q3. Design a decision support system for GPS route planning which determines the fastest and best route between two points by analyzing and comparing multiple possible options . (4.0 marks CO-2)

Q4. To design and implement a centralized placement platform for Google:

a) Design the functional and non functional requirements of the system

b) Perform the feasibility analysis of this system.

c) Draw the various types of system designs and an implementation plan for this system. (3.0 marks CO-1)