Class Test (2) Examination: Summer-2026
Course Code: CIS 331 (Batch: 18_A)
Course Title: Introduction to Blockchain and Cryptocurrencies
Date: 18/07/2026

Time: 30 Minutes **Total Marks: 15**

1. ***Read the following scenario and answer the question accordingly:***

A healthcare organization plans to build a blockchain-based patient record system. The hospital wants patient data to remain secure and tamper-proof. Doctors should automatically receive access to a patient's medical record only after the patient grants permission. The system should also prevent unauthorized modification of medical records while allowing authorized users to verify data authenticity.

Based on this scenario, answer the following:

a. Explain how smart contracts can automate patient authorization. [2]
b. Identify the most suitable cryptographic algorithm(s) (Symmetric, Asymmetric, or Hashing) for protecting patient data and justify your choice. [5]
c. Explain how these technologies together improve the security and trustworthiness of the healthcare system. [3]

2. Explain the purpose of hashing in cryptography. Mention two practical applications of hashing in blockchain or cybersecurity. [5]

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