Assignment 3

Date: 04/07/2025

1. Define pervasive computing and list its key characteristics. CO1
2. Explain the role of smart sensors in pervasive computing systems. CO1, CO4
3. Describe two examples of human-machine interfaces used in pervasive systems. CO1, CO4
4. How are pervasive devices being used in modern agriculture for smart farming? Co1, CO4
5. Explain the working principles of smart sensors and actuators in a healthcare monitoring system. CO1, CO4
6. Analyse the application of pervasive computing in healthcare, focusing on remote patient monitoring, data collection via smart sensors, and patient-doctor interaction. Discuss both the benefits and the potential risks. CO1, CO4
7. Discuss the ethical implications of pervasive computing in agriculture, with a focus on data collection, privacy, and the use of automated decision-making. What are the possible social and economic impacts of widespread adoption? CO1
8. Explain in detail the integration of biometric systems into human-machine interfaces in pervasive environments. Analyse the trade-offs between security, convenience, and privacy. CO1, CO4
9. Compare the role of pervasive devices in healthcare versus agriculture. How do these devices contribute to real-time decision-making and automation in both fields? Discuss specific devices used in each field. CO1, CO4
10. How does biometric authentication improve the security of human-machine interfaces in pervasive systems? CO1, CO4