

School of Computing Science and Engineering

Bachelor of Technology in Computer Science and Engineering
Semester End Examination - Jun 2024

Duration : 180 Minutes
Max Marks : 100

Sem VI - G1UC620B - Embedded Technology and IoT

General Instructions

Answer to the specific question asked

Draw neat, labelled diagrams wherever necessary

Approved data hand books are allowed subject to verification by the Invigilator

- 1) What are some of the biggest security vulnerabilities that come with IoT? K1(2)
- 2) Differentiate between microcontroller & microprocessor. K2(4)
- 3) What is an IoT framework? How does it help in the development of IoT applications K2(6)
- 4) Contrast the security challenges of IoT-based systems with traditional computing systems and discuss the measures to ensure the security of IoT-based systems K3(9)
- 5) Illustrate the architecture of microcontroller 8051 and explain the function of each block. K3(9)
- 6) Evaluate the reliability of ARM processors in critical applications such as automotive or medical devices. K5(10)
- 7) Analyze the role of IoT in various industries, such as healthcare, transportation and agriculture. What impact has IoT had on these industries and how has it transformed their operations and processes? K4(12)
- 8) Critically evaluate 7-layer CISCO architecture for IoT. K5(15)
- 9) Compare the LoRa and SigFox technologies upon three different parameters. Comment upon the long-range suitability of both. K5(15)
- 10) Provide a schematic diagram depicting the configuration and connections of a 7-segment display? Also listout at least 5 application for IoT system. K6(18)