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MIO-002

**DIPLOMA IN SMART CITY
DEVELOPMENT AND
MANAGEMENT/CERTIFICATE IN
SMART CITY DEVELOPMENT AND
MANAGEMENT (DSCDM/CSCDM)
Term-End Examination**

December, 2025

**MIO-002 : SMART TECHNOLOGIES
(HARDWARE AND SOFTWARE)**

Time : 3 Hours

Maximum Marks : 70

Note : Attempt any **seven** questions. All questions carry equal marks.

1. How can IoT be used to improve comfort, safety and efficiency in the home automation system ? 10
2. What are the differences between IIoT and IoT. 10

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3. What are the challenges to implement smart grid system in comparison to traditional electricity grids ? 10
4. What do you understand about Blockchain platforms and protocols ? How do these protocols differ from each other in their features and capabilities ? 10
5. What are the roles of Blockchain technology in smart transportation system ? 10
6. What are the neural networks and deep learning techniques ? Explain with suitable examples. 10
7. How can AI be used to improve healthcare in smart cities ? Explain with suitable examples. 10
8. What are the actuators ? How can they be used in smart cities projects ? List out the different types of actuators. 10
9. Discuss the role of Big data analytics in the development and management of smart cities. 10
10. How GIS relates to SCADA ? What are the ways in which GIS can be used to enhance the visualization and analysis of data in smart cities ? 10

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