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MIO-002

**DIPLOMA IN SMART CITY
DEVELOPMENT AND MANAGEMENT
(DSCDM)**

Term-End Examination

June, 2023

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

Time : 3 Hours

Maximum Marks : 70

Note : Answer any **seven** of the following questions.

All questions carry equal marks.

1. Explain applications of the Internet of Things (IoT) in home automation. 10
2. Explain Architecture of the Industrial Internet of Things (IIoT). 10
3. Write short notes on any *two* of the following : 2×5=10
 - (a) Energy storage technology
 - (b) Smart meter
 - (c) Microgrid

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4. Discuss challenges and limitations of blockchain technology. 10
5. Discuss blockchain based applications in the education sector. 10
6. Write short notes on any *two* of the following :
2×5=10
 - (a) Neural Networks
 - (b) Deep Learning
 - (c) K-means clustering
 - (d) Big Data
7. Discuss the role of AI in mobility and transportation. Elucidate your answer with examples of autonomous vehicles and smart parking systems. 10
8. Explain the applications of sensors in smart cities. 10
9. Explain the Data acquisition system in SCADA. 10
10. Discuss the application of AI in one of the following domains : 10
 - (a) Speech recognition
 - (b) Self-driving cars

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