

**DIPLOMA IN SMART CITY
DEVELOPMENT AND
MANAGEMENT/CERTIFICATE IN
SMART CITY DEVELOPMENT AND
MANAGEMENT
(DSCDM/CSCDM)**

Term-End Examination

June, 2026

**MIO-003 : SMART URBAN ENERGY AND
SMART TRANSPORTATION SYSTEMS**

Time : 3 Hours

Maximum Marks : 70

Note : (i) Attempt any **seven** questions.

(ii) All questions carry equal marks.

1. (a) Explain briefly the ways to produce solar Energy.
- (b) Discuss the smart storage technologies.

5+5

2. (a) Describe smart metering system with the help of a neat sketch.
- (b) What is SCADA ? Explain its significance in power distribution system. 5+5
3. (a) Describe the characteristics of metro rail system.
- (b) What are different technologies used for automatic vehicle identification system ? 5+5
4. What is intelligent planning and scheduling ? Discuss about the different stages of intelligent planning. 10
5. Describe adaptive traffic control system in detail. 10
6. (a) Discuss the power train topologies of hybrid electric vehicle.
- (b) Explain the adaptive cruise control system. 5+5

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7. Discuss the salient features of connected vehicles. 10
8. (a) Discuss the social benefits due to CAVs in smart city.
- (b) Explain the application of IoT in transportation. 5+5
9. Explain the efficient and sustainable smart bus networks with the help of a case study. 10
10. Write short notes on any *two* of the following : 5+5
- (a) Smart mobility
- (b) FAME-I
- (c) B-TRAC scheme
- (d) Bioenergy

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