

**DIPLOMA IN SMART CITY
DEVELOPMENT AND
MANAGEMENT (DSCDM)
Term-End Examination
June, 2025**

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

Time : 3 Hours

Maximum Marks : 70

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

1. (a) Discuss the need and plan of integrated multimodal transport system for a city like Delhi and Mumbai. 7
- (b) What do you understand by Intelligent Transport Management System (ITMS) ? Discuss the motivation behind introduction of ITMS to Ahmedabad bus service. 7

2. (a) Explain Alert Management in smart cities. Discuss the properties and types of alert systems. 7
- (b) What is Vehicle Infotainment System ? Discuss the major components of vehicle infotainment system. 7
3. (a) What are the different types of charging infrastructure for electric vehicles ? Explain how a wireless charging system works for electric vehicles. 7
- (b) What do you understand by e-Vehicle life cost ? Discuss about life cycle cost analysis of electric vehicles. 7
4. (a) Briefly discuss about the types of electric vehicle system. 7
- (b) What is Intelligent Speed Adaptation ? Discuss about collision warning system. 7
5. (a) How does Integrated Multimodal Transport System (IMMTS) work in integrating various modes ? 7

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- (b) Explain the different steps in Automated Number Plate Recognition System (ANPR). 7
6. (a) Explain how the e-Challan system works. 7
- (b) Discuss the applications of CCTV based surveillance system. 7
7. Write short notes on any *four* of the following : $4 \times 3.5 = 14$
- (a) Smart Parking
- (b) Cybersecurity in Smart City
- (c) Smart Railway Station
- (d) Route Planning in Smart City
- (e) SCOOT (Split Cycle Offset Optimization Technique)
- (f) GSM-Based Traffic Management

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