

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

Term-End Examination

December, 2022

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

Time : 3 hours

Maximum Marks : 70

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

1. (a) Describe the working of concentrated solar plant, with the help of a neat sketch.
(b) Explain pumped hydro energy storage system. *5+5=10*
2. What is Smart Grid ? How does smart meter work in Smart Grid infrastructure ? *10*
3. Write in brief about the following (any **five**) : *5×2=10*
 - (a) PLC
 - (b) BRT
 - (c) AVI
 - (d) FPGA
 - (e) RFID
 - (f) IMMETS
 - (g) ITS

4. (a) Describe the powertrain topologies of hybrid electric vehicles.
- (b) Explain the working of automatic number plate recognition system. *5+5=10*
5. (a) Discuss the various advantages of IoT in transportation sector.
- (b) Define autonomous vehicle. Discuss the effect of autonomous vehicle on transportation sector. *5+5=10*
6. Discuss the need of infrastructure upgradation for connected and autonomous vehicles. *10*
7. What is SCOOT ? Explain the process of SCOOT analysis in detail. *10*
8. Explain different ticketing technologies. Write the advantages of automatic ticketing technologies. *10*
9. Describe the various stages of intelligent planning in detail. *10*
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