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**Sixth Semester B.E. Degree Examination, Jan./Feb. 2023**  
**Intelligent Transportation Systems**

Time: 3 hrs.

Max. Marks: 100

*Note: Answer any FIVE full questions, choosing ONE full question from each module.*

**Module-1**

- 1 a. What is Intelligent Transport System? Explain the different functional areas of Intelligent Transport system. (10 Marks)
- b. Explain the challenges and opportunities for development of Intelligent transport system in India. (10 Marks)

**OR**

- 2 a. Explain the different methods of data collection techniques adopted in Intelligent transport system. (10 Marks)
- b. Explain the different types of Detectors or Sensors used in Intelligent transport system. (10 Marks)

**Module-2**

- 3 a. What are the different ITS tools which can be used in Traffic management system in a city. Explain. (10 Marks)
- b. Mention the ITS applications for commercial vehicle operation. Explain. (10 Marks)

**OR**

- 4 a. Explain with flow diagram for concept of a typical system adopted in Advanced Traveller information system. (10 Marks)
- b. Mention the ITS applications in the field of Intermodal freight transport system. (10 Marks)

**Module-3**

- 5 a. Explain the following in the context of ITS architecture : (10 Marks)
  - (i) Logical architecture.
  - (ii) Physical architecture.
  - (iii) Organizational architecture
- b. Mention the functional areas and functions of European ITS frame work architecture. (10 Marks)

**OR**

- 6 a. How can ITS planning be integrated with the transportation planning? Explain. (10 Marks)
- b. Mention the requirements for urban transportation plan and ITS planning. Explain. (10 Marks)

**Module-4**

- 7 a. Explain the need of training and education for implementation of ITS. (10 Marks)
- b. Discuss the impact of standards implementation for technology deployment in ITS. (10 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.  
 2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.

**OR**

- 8 a. Explain advanced vehicle control and safety systems in ITS. (10 Marks)  
b. Explain sustainable mobility in ITS. (10 Marks)

**Module-5**

- 9 a. Explain the process of electronic Toll collection system. (10 Marks)  
b. Mention the benefits of Automated Highway System (AHS). (10 Marks)

**OR**

- 10 a. Explain briefly Road Pricing and Platoons in ITS. (10 Marks)  
b. Explain with a case study for implementation of ITS in developing country. (10 Marks)

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