



## UNIVERSITY OF PETROLEUM AND ENERGY STUDIES

End Semester Examination, December 2017

**Program: Master of Planning**

**Subject (Course): Intelligent Transport System (ITS)**

**Course Code: MPLO 802**

**No. of page/s: 03 excluding cover**

**Note: Laptops and Mobile Phones are not allowed.**

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**Semester – III**

**Max. Marks : 100**

**Duration : 3 Hrs**

### Section – A – Short Answer Type Questions (Word Limit – 60)

All questions are compulsory.

(4 Questions x 5 Marks) = 20 Marks

- Q1. “The development and implementation of advanced technologies is important to the successful management and operation of ITS in any country.” Explain with an example.
- Q2. Explain in brief, the History and Development of ITS worldwide. Support your answer with graphs/sketches.
- Q3. How are the Software in Intelligent Transport Systems applied? List four (4) no of Companies working in ITS field.
- Q4. How costing plays an important role in Intelligent Transport Systems projects? List Ten (10) no of components in ITS while estimating the cost.

**Section – B – Medium Answer Type Questions (Word Limit – 200)**

Answer any Five (5) questions.

(5 Questions x 8 Marks) = 40 Marks

- Q1. What are the Automated Fare Collection Systems (AFCS)? How they support the Intelligent Transportation? Explain with figure/sketch.
- Q2. What are the Depot and Control Centre in any Transport System? How they support the Intelligent Transport Management? Explain with figure/sketch.
- Q3. Explain in details about some of the specific actions required to meet the challenges in efficient development of ITS in India. Explain with examples.
- Q4. Write briefly upon Advanced Traffic Management System (ATMS) and Advanced Public Transport System (APTS). Explain their use with the examples.
- Q5. What is Parking Guidance and Management System? What are the Key benefits of the system in Transport? Explain their use with two examples.
- Q6. What are the issues and problems with present structure of Institutions and Organization? How integration of these will enable the more efficiency and productivity in ITS?

**Section – C – Long Answer Type Questions (Word Limit – 500)**

Answer all questions. (2 Questions x 20 Marks) = 40 Marks

- Q1. Explain the Concept of Transport Pricing System. What are Electronic Road Pricing (ERP) and Electronic Toll Collection (ETC) and how they support in development of Transport Infrastructure? Explain citing examples in India and outside India. Support your answer with graphs/sketches.
- Q2. “Intelligent Transport Systems play an important role in increasing the Efficiency, Performance and Productivity of a Public Transport System.” Comment, explain and review in detail citing each examples of Metro Rail System, Bus Rapid Transit System (BRTS) and City Bus System (CBS). Support your answer with graphs/sketches.

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**Semester – III**

**Max. Marks : 100**

**Duration : 3 Hrs**

### Section – A – Short Answer Type Questions (Word Limit – 60)

All questions are compulsory.

(4 Questions x 5 Marks) = 20 Marks

- Q1. Why Intelligent Transport Systems are required? How Intelligent Transport Systems are important in commuters/ passengers/ freight daily travel?
- Q2. How costing plays an important role in Intelligent Transport Systems projects? List Ten (10) no of components in ITS while estimating the cost.
- Q3. How Intelligent Transport Systems play a role of integrator between Transport Infrastructure and Transport Modes?
- Q4. Explain in brief, the History and Development of ITS worldwide. Support your answer with graphs/sketches.

**Section – B – Medium Answer Type Questions (Word Limit – 200)**

Answer any Five (5) questions.

(5 Questions x 8 Marks) = 40 Marks

- Q1. What are the Automated Fare Collection Systems (AFCS)? How they support the Intelligent Transportation? Explain with figure/sketch.
- Q2. Explain in details about some of the specific actions required to meet the challenges in efficient development of ITS in India. Explain with examples.
- Q3. Write briefly upon Advanced Traffic Management System (ATMS) and Advanced Public Transport System (APTS). Explain their use with the examples.
- Q4. Discuss and define the concepts of Electronic Road Pricing (ERP) and IT enabled Parking Management. Quote two examples for each component.
- Q5. Discuss and describe the major initiatives and steps taken by Seoul city in ITS, PIS and AFCS as part of urban traffic and transportation management. Support the answer with examples.
- Q6. Discuss and describe the major initiatives and steps taken by any two Indian cities in ITS, PIS and AFCS as part of urban traffic and transportation management. Support the answer with examples.

**Section – C – Long Answer Type Questions (Word Limit – 500)**

Answer all questions. (2 Questions x 20 Marks) = 40 Marks

- Q1. “Indian cities have much more complex institutional and organizational structure systems compare to any other third world cities. ITS play an important role in city’s improved and enhanced Traffic and Transport Management. But the cities still face barriers to implement the ITS in major transport infrastructure.” Discuss, comment and explain the statement within the context. What kind of (Short Term, Medium Term and Long Term) projects can be identified under pan city programe? Support the answer with examples, sketches and graphs.
- Q2. “Intelligent Transport Systems play an important role in increasing the Efficiency, Performance and Productivity of a Public Transport System.” Comment, explain and review in detail citing examples each for Metro Rail System, Bus Rapid Transit System (BRTS) and City Bus System (CBS). Support your answer with graphs/sketches.

