

GUJARAT TECHNOLOGICAL UNIVERSITY
ME – SEMESTER - IV (OLD) – • EXAMINATION – SUMMER 2017

Subject Code: 741301**Date: 03/05/2017****Subject Name: Advances in Transportation Engineering****Time: 2:30 pm to 05:00 pm****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1 (a)** Explain the working of automatic toll collection system? Discuss its advantages and limitations. **07**
- (b)** What is rheology? Discuss the rheological behaviour of bitumen. Why is it significant to study the rheological properties as compared to physical properties? **07**
- Q.2 (a)** What is area traffic control system? Explain its working in brief? **07**
- (b)** What is adaptive traffic control system? Write its advantages and disadvantages. **07**
- OR**
- (b)** Justify the statement - "Intelligent Transportation System will improve the accident hazard effectively". **07**
- Q.3 (a)** What is smart vehicle? How it will be useful to the road user? **07**
- (b)** Describe in detail the Advanced Traveler information systems. **07**
- OR**
- Q.3 (a)** How will ITS will affect the road pricing? Explain any example related to the above for the Indian scenario. **07**
- (b)** Explain by drawing sketch: public transportation management system by satellite. **07**
- Q.4 (a)** What is microsurfacing? Describe briefly the various application locations of the same. **07**
- (b)** What are admixtures? List different types of admixtures and their influence on performance of bituminous Pavement. **07**
- OR**
- Q.4 (a)** Explain PMB, EMB, NRMB and CRMB. **07**
- (b)** What are advantages of Porous asphalt-mix? How it is produced and tested as per IS specifications? **07**
- Q.5 (a)** Explain briefly the High Performance Concrete along with the areas of applications. **07**
- (b)** Write note on Modified Bitumen Emulsion. **07**
- OR**
- Q.5 (a)** Write short note on: Super pave. **07**
- (b)** Discuss the tests to be conducted to study the ageing behavior of bitumen binder. **07**
