

GUJARAT TECHNOLOGICAL UNIVERSITY**M. E. Sem – IV Examination May 2011****Subject Code : 741301****Subject Name: Advances in Transportation Engineering****Date: 16/05/2011****Time: 10.30 am – 01.00 pm****Total Marks: 70****Instructions:**

1. All questions are **COMPULSARY** to attempt
2. Figure to the right indicate **full marks** of the question.
3. Assume suitable data if necessary.

- Q.1 (A)** Describe in detail the Advance Traveler Information systems. **07**
(B) How the Advanced Traffic Management system will improve the Congestion problem of your city. **07**

- Q.2 (A)** Explain briefly (i) PMB, (ii) EMB, (iii) NRMB, (iv) CRMB **07**
Also mention the IS requirement and testing procedures for the above modified bitumen.
(B) What is microsurfacing? Describe briefly the various application locations of the same. **07**

OR

- (B)** What is Fiber Reinforced Concrete? What is the effect of fibers in the concrete? **07**
- Q.3 (A)** How will ITS will affect the road pricing? Explain any example related to the above for the Indian scenario. **07**
(B) Justify the statement “Intelligent Transportation System will improve the accident hazard effectively”. **07**

OR

- Q.3 (A)** How will you design the sustainable mobility for the metro cities by using the Intelligent Transportation System? **07**
(B) Explain with the example the application of ITS in Travel demand management. **07**
- Q.4 (A)** What is smart vehicle? How it will be useful to the road user? **07**
(B) Explain with neat sketch the Electronic Toll collection system. Also specify the requirement of the hardware as well as software for same. **07**

OR

- Q.4 (A)** Describe briefly: Automatic Vehicle Identification and Classification. **07**
(B) What is smart highway? How it will be affect the road safety? **07**
- Q.5 (A)** Describe in detail the Porous Asphalt. Briefly explain the advantage of the same. **07**
(B) Write short note on : Super pave. **07**

OR

- Q.5 (A)** Where do you suggest the use of stone matrix asphalt? Briefly explain its mix design. **07**
(B) Explain briefly the High Performance Concrete along with the areas of applications. **07**
