

GUJARAT TECHNOLOGICAL UNIVERSITY**M.E -IVth SEMESTER-EXAMINATION – MAY- 2012****Subject code: 741301****Date: 12/05/2012****Subject Name: Advances in Transportation Engineering****Time: 02:30 pm – 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) What do you understand by Intelligent Transportation System (ITS)? How it is useful in transportation network operations? **07**

(b) What is meant by High Performance Highway Construction Materials? Where and how do you apply Fly ash in highway construction? **07**

Q.2 (a) Discuss in detail application of Advanced Traffic Management System. **07**

(b) Describe the importance of use of recyclable waste materials in highway construction. **07**

OR

(b) Differentiate between NRMB and CRMB. What are their IS requirements and testing procedures? **07**

Q.3 (a) Explain the application of ITS in Public Transportation System with the example of BRTS in Ahmedabad. **07**

(b) Describe Adaptive Traffic Control System with examples. **07**

OR

Q.3 (a) Discuss: ITS applications in highway accident prevention. **07**

(b) Write a short note of ITS applications for road pricing. **07**

Q.4 (a) Give a brief note on Modified bitumen emulsion and its testing procedure. **07**

(b) Explain briefly about “Smart Vehicles”. **07**

OR

Q.4 (a) How will you prepare porous asphalt mix? What are the advantages of porous asphalt mix? **07**

(b) Discuss about ITS applications in regional strategic transportation planning. **07**

Q.5 (a) Where do you suggest micro surfacing? Explain its application procedure. **07**

(b) Describe binder specifications and gyratory compactor for the Superpave mix. **07**

OR

Q.5 (a) Compare the suitability and applicability of different fiber materials used in Fiber Reinforced Concrete. **07**

(b) What are the advantages of using High Performance Concrete in road construction? What are its IS requirements? **07**
