

GUJARAT TECHNOLOGICAL UNIVERSITY**M. E. Sem. – IInd - Examination – June/July- 2011****Subject Code: 1721306****Subject Name: Transportation Facility Design****Date:27/06/2011****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) “Intersections are inevitable in the urban area due to its inherent necessity but they are the main trouble some location for the transportation facility” comment. (7)

(B) Explain briefly the various types of at grade intersection. (7)

Q.2 (A) What type of crosswalk design is most appropriate for school zones, high pedestrian traffic and mid block crossings? (7)

(B) Evaluate the Expressway joining Ahmedabad-Vadodara with respect to the safety and geometry. (7)

OR

(B) How can transit become a fully integrated and preferred transportation alternative for residents of metro cities? Briefly enumerate some specific infrastructure improvement /design that create this situation? (7)

Q.3 (A) Where do you suggest signalized intersection? How will you choose the phasing of the signal? (7)

(B) Describe briefly- Area traffic control (7)

OR

Q.3 (A) Where do you suggest the rotary intersection? Explain with neat sketch rotary elements. (7)

(B) Explain briefly the purpose of channelization? (7)

Q.4 (A) Critically analyze the present terminal facilities available in the city bus station of the major cities of Gujarat. (7)

(B) For the above problem, which are your feasible improvements / suggestions to upgrade the present infrastructure as per the minimum standard? (7)

OR

- Q.4 (A)** How do you determine the present capacity of the Bus terminal? Which measures from the information technology will be useful to improve the existing capacity? **(7)**
- (B)** Which bus stop location (Mid block, Far side, Near side) as per design point of view is far safer as well as useful to the user?

- Q.5 (A)** For the existing 4 lane road without median (30 meter wide road) main city business/commercial area needs to be upgraded for the design of safety and aesthetics. Suggest the alternate design for the corridor of 500 meter without any intersection with neat sketch **(7)**
- (B)** How can bicycle become a fully integrated and preferred transportation alternative for residents of major cities of India? Can you enumerate several specific infrastructure improvements that create this situation? **(7)**

OR

- Q.5 (A)** Enlist the terminal functions. Compare the Passenger Terminal with the Goods Terminal **(7)**
- (B)** “Goods Terminal Design needs immediate attention in the urban area due to present state of high growth of goods movement by roadway.” How do you justify the above condition in the Indian Context? **(7)**
