

B.Tech. CIVIL ENGINEERING (BTCLEVI)

Term-End Examination

00175

June, 2014

BICEE-023 : TRAFFIC ENGINEERING

Time : 3 hours

Maximum Marks : 70

Note : Attempt any five questions. All questions carry equal marks.

1. (a) What is traffic engineering ? Discuss the scope and objectives of traffic engineering. 7
- (b) Discuss the role of various components of road traffic, namely, vehicle, driver and road, in detail. 7
2. How do road user characteristics and vehicle characteristics affect road traffic ? Discuss them in detail. 14
3. (a) What are the objectives of traffic engineering studies ? Explain briefly the various methods used in traffic engineering studies and analysis. 7
- (b) What are the various applications of origin and destination studies ? Briefly discuss the methods used for collecting O and D data. 7

4. (a) Discuss the time sharing and space sharing concepts to control the traffic movements. 7
- (b) Name some at-grade crossings. What provisions should be made by a traffic engineer to allow safe crossing of pedestrians and cyclists ? 7
5. (a) What are grade separated intersections ? Discuss their warrants and design features. 7
- (b) Explain, in detail, the various measures used to prevent accidents. 7
6. Discuss, in detail, the planning and design of various traffic management measures. 14
7. (a) How would you redesign existing signals ? Explain with the help of a case study. 7
- (b) What are the visual impacts of traffic control devices ? How can these be alleviated ? 7
8. Write short notes on any **four** of the following : $4 \times 3 \frac{1}{2} = 14$
- (a) Parking
- (b) Bus Bay Design
- (c) Traffic Maneuvers
- (d) Traffic Rotary
- (e) Road Lighting
- (f) Channelising islands
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