

22507

12425

3 Hours / 70 Marks

Seat No.

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- Instructions :**
- (1) All Questions are *compulsory*.
 - (2) Illustrate your answers with neat sketches wherever necessary.
 - (3) Figures to the right indicate full marks.
 - (4) Assume suitable data, if necessary.

Marks

1. Attempt any FIVE of the following :

10

- (a) List the objectives of traffic engineering.
- (b) Write essential road users characteristics to be considered in traffic engineering.
- (c) Define the term traffic volume study.
- (d) List traffic control devices.
- (e) State purposes of segregation of traffic.
- (f) List out the factors affecting reaction time of driver.
- (g) Classify Road Signs as per IRC : 67-1977.

2. Attempt any THREE of the following :

12

- (a) State methods of origin & destination studies. Explain any one method of origin & destination study.
- (b) Explain the necessity of various traffic control devices for smooth traffic flow.
- (c) Explain points to be considered while designing road sign.
- (d) Draw the following traffic sign for the urban area :
 - (i) U-Turn prohibited
 - (ii) No parking
 - (iii) Railway crossing ahead
 - (iv) One-way sign



- 3. Attempt any THREE of the following : 12**
- (a) State various types of traffic island & explain any one with neat sketch.
 - (b) Enumerate the advantages and disadvantages of traffic activated signals.
 - (c) Define arboriculture. Give its objectives.
 - (d) Discuss the special maintenance & care required for road side plantation.
- 4. Attempt any THREE of the following : 12**
- (a) State the factors affecting visibility of Road at night.
 - (b) Enumerate different causes of Road accidents.
 - (c) Explain methods of recording & reporting of an accident.
 - (d) Suggest various measures to prevent Road accident.
 - (e) Describe legislation & law Enforcement education for Road accident studies.
- 5. Attempt any TWO of the following : 12**
- (a) Explain Manual Count Method of collection of traffic volume count data with observation table.
 - (b) Draw and explain the following road marking :
 - (i) center line
 - (ii) stop lines
 - (iii) pedestrian or zebra crossing
 - (c) List the methods of representing spot speed studies. Explain cumulative method of representation showing graph for percentile speeds.
- 6. Attempt any TWO of the following : 12**
- (a) Draw the following road intersection showing traffic flow pattern on it :
 - (i) Clover leaf pattern
 - (ii) Trumpet Type
 - (b) Explain with neat sketch collision & condition diagram.
 - (c) Describe step wise procedure of Fix-Time Cycle Method of Computing Signal Time.
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