

315318

25226

3 Hours / 70 Marks

Seat No.

--	--	--	--	--	--	--	--

-
- Instructions* – (1) All Questions are *Compulsory*.
(2) Answer each next main Question on a new page.
(3) Illustrate your answers with neat sketches wherever necessary.
(4) Figures to the right indicate full marks.
(5) Assume suitable data, if necessary.
(6) Use of Non-programmable Electronic Pocket Calculator is permissible.
(7) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.
(8) Use of Steam tables, logarithmic, Mollier's chart is permitted.

Marks

1. **Attempt any FIVE of the following :** **10**
- a) Define Traffic volume study.
 - b) Enlist the methods of origin and destination study.
 - c) Define a parking survey.
 - d) Enlist the common terms used in parking survey.
 - e) State the different types of parking survey. (Any two)
 - f) Define term Arboriculture.
 - g) List out the key element involved in a road accident.

P.T.O.

- 2. Attempt any THREE of the following : 12**
- a) Define traffic engineering and scope of traffic engineering.
 - b) State the factor affecting on reaction time.
 - c) Explain the essential physical road characteristics to be considered in traffic engineering.
 - d) Explain the purpose of traffic volume study of a road section.
- 3. Attempt any THREE of the following : 12**
- a) Explain the factors affecting selection of type of trees.
 - b) Describe the factors affecting visibility of road at night time.
 - c) Define street lighting and state necessity of street lighting.
 - d) Describe the common techniques used for tree care and maintenance in Arboriculture.
- 4. Attempt any THREE of the following : 12**
- a) Describe the benefits of (ITS) Intelligent Transportation System in road survey.
 - b) Explain the ill effects of unregulated parking in urban areas.
 - c) Explain the parking space requirement as per IRC standards.
 - d) Suggest preventive measures for avoiding road accidents.
 - e) Explain the causes of road accidents. (Any four)
- 5. Attempt any TWO of the following : 12**
- a) Compare different method of traffic volume data representation and suggest suitable method for congested urban intersection.
 - b) Draw neat sketch diagram of on-street parking system for a busy commercial street.
 - c) Demonstrate how off-street parking methods help to reduce on-road congestion in commercial hubs.

6. Attempt any TWO of the following :**12**

- a) Following spot speed data of vehicles on a highway. Prepare cumulative frequency table and plot cumulative speed distribution curve. From curve determine 85th percentile speed.

Speed Range (km/h)	No. of vehicles
30 – 40	05
40 – 50	12
50 – 60	25
60 – 70	40
70 – 80	10
80 – 90	08

- b) Explain the legislation and law enforcement, education in road accident studies.
- c) Explain the following with respect to Road accidental studies
- Condition diagram.
 - Collision diagram.
-