

22507

11920

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.
 - (5) Use of Non-programmable Electronic Pocket Calculator is permissible.

Marks

1. Attempt any FIVE of the following :

10

- (a) Define traffic engineering.
- (b) Write the essential road characteristics to be considered in traffic engineering.
- (c) Give the purposes of traffic studies.
- (d) List out the traffic controlling devices.
- (e) Write the types of signals to be provided on road.
- (f) List out the factors affecting reaction time of driver.
- (g) Classify the traffic markings.

2. Attempt any THREE of the following :

12

- (a) Describe the necessity of origin and destination study.
- (b) Draw any two each of regulatory signs and cautionary signs.
- (c) Explain the uses of various carriage way markings.
- (d) Write the points to be considered while erecting road signs.

- 3. Attempt any THREE of the following : 12**
- (a) Compare the fixed time signals with manually operated signals.
 - (b) Enumerate the advantages and disadvantages of grade separated intersections.
 - (c) Describe the factors affecting visibility of road at night time.
 - (d) Write the objectives of road arboriculture.
- 4. Attempt any THREE of the following : 12**
- (a) Discuss the factors affecting selection of type of roadside trees.
 - (b) Suggest the preventive measures to prevent road accidents.
 - (c) Describe the points to be considered for road safety.
 - (d) Explain the method of recording and reporting of an accident.
 - (e) Draw the collision diagram for the following cases.
 - (i) head on collision of two vehicles
 - (ii) striking of vehicle on another moving vehicle
- 5. Attempt any TWO of the following : 12**
- (a) Describe the procedure of traffic volume count on any road intersection. Also, write the method of representation of traffic volume count data.
 - (b) Suggest the road markings for the following and show it with sketch :
 - (i) road side parking
 - (ii) road side tree
 - (iii) overtaking not allowed on road
 - (c) Discuss the method of spot-speed studies on a road section.

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

- (a) Draw the following road intersections showing traffic flow pattern on it.
 - (i) cloverleaf pattern
 - (ii) trumpet type
 - (b) Discuss the legislation and law enforcement education in road accident studies.
 - (c) Explain with sketch :
 - (i) rotary island
 - (ii) channelizing island
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