Time: 3 Hrs   Max Marks: 100

ANSWER ALL THE QUESTIONS

Part A (10 x 2 = 20 Marks)

1. Write short note on glare recovery aspect of the human eye.
2. What is the recent advancement in steering system?
3. What is meant by desire line diagram?
4. What does parking demand mean?
5. What do you understand by the term "green wave"?
6. How would you arrive the capacity of weaving section of a rotary intersection?
7. List the various aspects of human failure that may lead to road accidents.
8. What are ill effects of air pollution due to vehicular emissions?
9. What are the advantages of exclusive bus lanes?
10. When would you opt for Transport Demand Management?

PART B (5X 16= 80 Marks)

11. (a)   Write briefly about the acceleration and braking characteristics of vehicles observed on Indian roads.

(OR)

(b)   With neat sketches explain the fundamentals of traffic flow.

12. (a)   Explain briefly how you would organize and conduct road side interview for studying the Origin and Destination of vehicles entering and leaving a study area.

(OR)

(b)   With a neat sketch explain how you would establish the speed limits of a road section with the observed spot speed data collected.

13. (a)   A traffic signal is to be installed at an intersection where two six lane divided roads intersect at right angles The peak hour traffic flow observed is as follows:

Name of the Arm feeding traffic to the Intersection	Traffic Flow in PCUs/hour		
	Left	Straight	Right
North	380	606	306
East	391	615	342
South	297	630	284
West	389	597	321

Design the Phasing Pattern and green time for each phase and the delay for one phase.

(OR)

(b)   A rotary is proposed in a rural area at a location where two four lane divided roads meet each other. The peak hour traffic flow is as follows:

Name of the Arm feeding traffic to the Intersection	Traffic Flow in PCUs/hour		
	Left	Straight	Right
North	250	550	250
East	300	520	300
South	305	387	390
West	340	500	450

Design a rotary for the intersection and check whether the designed weaving section has adequate capacity to carry the above traffic.

14. (a)   Explain how failure of human aspects would lead to road accidents

(OR)

(b)   Write in detail the major reasons for noise pollution due to vehicles on the road and the methods of reducing the noise levels in the adjoining areas.

15. (a)   When would you suggest road pricing? Justify the need, situations where you would recommend and methods you would adopt for road pricing.

(OR)

(b)   Write a brief note on:
       1. Subsidy to Public Transport
       2. Staggering of working hours