Oct-22/BE/Insem-28
B.E. (Civil)
TRANSPORTATION ENGINEERING
(2019 Pattern) (Semester - VII) (401002)

Time : 1 Hour]   *[Max. Marks : 30*

Instructions to the candidates :

1) *Answer Q.1 or Q.2, Q.3 or Q.4,*
2) *Figures to the right indicate full marks*
3) *Use of logarithmic tables, slide rule, Mollies charts, electronic pocket calculator and steam tables is allowed.*
4) *Assume suitable data jf necessary.*
5) *Near diagrams must be drawn wherever necessary.*

Q1) a) Briefly explain the Jayakar committee and its recommendations. **[4]**

b) Explain the classification of roads as per Nagpur road plan. **[5]**

c) Enumerate salient features of road development plan vision 2021. **[6]**

OR

Q2) a) Explain briefly the requirements of an ideal highway alignment. **[4]**

b) An imaginary area with existing roads. There are four alternate plan proposals P, Q, R and S with different road length by adding extra road links to the existing roads in the area and the details of the population and products served are given below: **[5]**

Proposal	Total Road length km	Number of towns and villages served with population range				Total agricultural and industrial products thousand tonnes.
		1001-2000	2001-5000	5001-10000	>10000	
P	300	160	80	30	6	200
Q	400	200	90	60	8	270
R	500	240	110	70	10	315
S	550	248	112	73	12	335

Workout the utility per unit length for each of the systems and indicate which of the plan yield the maximum utility based on saturation system.

c) Discuss briefly the various road patterns with neat sketches. **[6]**

P.T.O.

Q3) a) Discuss the various vehicular characteristics which affect the design of roads. **[5]**

b) What are the objectives of carrying out traffic volume study? **[5]**

c) Discuss the various causes of accident and mention the measures to reduce accident rate. **[5]**

OR

Q4) a) With neat sketches, explain any five traffic regulatory signs. **[5]**

b) Estimate the theoretical capacity of a traffic lane with one way traffic flow at a stream speed of 40 kmph and assume average length of vehicles = 5 m. **[5]**

c) Write short notes on : **[5]**

  i) Parking studies

  ii) Highway lighting