



GIET UNIVERSITY, GUNUPUR - 765022
B. Tech (Sixth Semester Regular) Examinations, May - 2024
21BCVPC36001 - Transportation Engineering-I
(Civil)

Time: 3 hrs

Maximum: 70 Marks

(The figures in the right hand margin indicate marks)

PART – A**(2 x 5 = 10 Marks)**Q.1. Answer **ALL** questions

	CO #	Blooms Level
a. What are the classifications of roads?	CO1	K1
b. What is Gradient? What are the types?	CO2	K1
c. What are the engineering surveys for highway locations ?	CO2	K1
d. Explain PIEV Theory.	CO3	K1
e. What are the objects of carrying out the traffic volume studies?	CO4	K1

PART – B**(15 x 4 = 60 Marks)**Answer **ALL** questions

	Marks	CO #	Blooms Level
2. a. Briefly explain all road development plans in India.	8	CO1	K1
b. Briefly explain about Jayakar committee recommendation.	7	CO1	K1
(OR)			
c. How abrasion test on aggregate can be determined. Explain the procedure ?	7	CO1	K2
d. What are the different elements for a highway geometric design ? Explain	8	CO1	K2
3.a. The design speed of a highway is 80kmph. There is a horizontal curve of radius 200m on a locality. Calculate the super elevation needed to maintain to the speed .If it is not possible or not within the limit ,calculate maximum allowable speed ?	8	CO2	K3
b. Derive an equation for OSD.	7	CO2	K3
(OR)			
c. Explain different types of intersections with neat sketch.	8	CO2	K4
d. Explain about Parking studies and its types.	7	CO2	K1
4.a. Explain road user characteristics and vehicular characteristics.	7	CO3	K3
b. Explain the procedure to conduct spot speed studies.	8	CO3	K2
(OR)			
c. What are the different methods of presenting traffic volume data.	8	CO3	K1
d. Explain different traffic control signs their types and uses.	7	CO3	K1
5.a. Explain different traffic signal systems.	8	CO4	K2
b. Explain the construction of flexible pavement.	7	CO4	K3
(OR)			
c. Explain penetration test of bitumen.	7	CO4	K1
d. Explain ductility test of bitumen.	8	CO4	K1

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