Q.P. Code: 16CE129 **R16**

Reg. No: | | | | | | | | | | |

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR

(AUTONOMOUS)

B.Tech III Year II Semester Regular Examinations May 2019

TRANSPORTATION ENGINEERING-I

(Civil Engineering)

Time: 3 hours Max. Marks: 60

(Answer all Five Units **5 x 12 = 60** Marks)

UNIT-I

1	**a**	What are the salient features of Nagpur road development plan? Discuss.	6M
	b	Illustrate the significant recommendations of Jayakar committee report.	6M
		OR	
2	**a**	What are obligatory points? How they influence a change in the alignment?	6M
	b	What are the engineering surveys required for fixing highway alignment?	6M

UNIT-II

3	**a**	Explain briefly about the following: i) Pavement surface characteristics ii) Width of pavement or Carriageway	6M
	b	Write short note on i) Transition curves ii) Extra widening	6M
		OR	
4	**a**	Explain the importance of friction offered by road surface. Also discuss about the factors which influence highway friction.	6M
	b	The radius of a horizontal circular curve is 100m. The design speed is 50 kmph and the design coefficient of lateral friction is 0.15. Calculate the super elevation required if full lateral friction is assumed to develop.	6M

UNIT-III

5	**a**	Explain briefly about various factors which affect the road user characteristics and vehicular characteristics.	6M
	b	Explain the term traffic volume and what are the objects of carrying out traffic volume studies?	6M
		OR	
6		Describe various types of traffic signs used in traffic control and regulation giving two Examples for each type. Support your answer with suitable sketches and specifications for the signs.	12M

UNIT-IV

7		What are the different types of bituminous materials used in road construction? Under what Circumstances each of these materials are preferred?	12M
		OR	
8		List different tests on road aggregates and mention their advantages and limitations.	12M

UNIT-V

9		Draw a sketch of flexible pavement cross section and show the component parts. Enumerate the functions and importance of each component of the pavement.	12M
		OR	
10		Classify different types of joints in CC pavements and mention the objects of each.	12M

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