## APJ ABDULKALAM TECHNOLOGICAL UNIVERSITY 08 PALAKKAD CLUSTER

Q. P. Code : TE0819219-I

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Name: .....

Reg. No:....

## THIRD SEMESTER M.TECH. DEGREE EXAMINATION December 2019

**Branch: Civil Engineering** 

**Specialization: Transportation Engineering** 

**08CE7219 LOW VOLUME ROADS** 

(Common to TE)

Time:3 hours

Max. marks: 60

## Answer all six questions.

Modules 1 to 6: Part 'a' of each question is compulsory and answer either part 'b' or part 'c' of each question.

Q.no.	Module 1	Marks	
1.a	What are the requirements of alignment between two points?	3	
Answer b or c			
b	Explain the approach for network connectivity of habitations.	6,	
c	What are the data to be collected to prepare a master plan of a rural road?	6	
Q.no.	Module 2	Marks	
2.a	What is the importance of widening of curves?	3	
Answer b or c			
b	Compare the cross sectional elements of a road in plain and mountainous terrain with diagram	6	
• C	Calculate the total superelevation required on a road curve of 300m radius for a vehicle speed of 80 km/h. The width of the road is 15m and the coefficient of friction is $0.15$ .	6	
Q.no.	Module 3	Marks	
3.9	What are the different soil investigations to be carried out?	3	

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## Answer b or c

b	Describe in detail the construction procedure for fly ash stabilized embankment.	6
c	Write in detail the procedure for Marshall mix design.	6
	7	
Q.no.	Module 4	Marks
<b>4.</b> a	List out the design parameters in IRC for pavement design	3
	Answer b or c	
b	Explain the CBR Method of pavement design	6
С	Elaborate on the functions of pavement components.	6
Q.no.	Module 5	Marks
5.a	Discuss on non-bituminous road construction	4
	Answer b or c	
b	Give the specifications of materials for Bituminous macadam	8
с	Give the specifications of materials for crusher run macadam.	8
		2. 2.
Q.no.	Module 6	Marks
6.a	What are the distresses in flexible pavements.	4
	Answer b or c	
b	Explain the design procedure for surface dressing	8
с	Describe the organization setup for the quality control of pavement construction	8