APJ ABDULKALAM TECHNOLOGICAL UNIVERSITY

08 PALAKKAD CLUSTER

Q. P. Code:TE0822319-I

(Pages: 2)

Name: ....

Reg. No: ....

THIRD SEMESTER M.TECH. DEGREE EXAMINATION DECEMBER2022

Branch: Civil Engineering   **Specialization: Transportation Engineering**

08CE7219 Low Volume Roads

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	Explain utility value of a habitation?	3

Answer b or c

b	What are the data to be collected to prepare a master plan of a rural road?	6
c	What are the contents of a detailed project report of an engineering survey of location of alignment?	6

Q. No.	Module 2	Marks
2.a	Differentiate between the two longitudinal slopes provided on curves.	3

Answer b or c

b	Justify the setback distance in design of horizontal alignment? How can the setback distance be calculated?	6
c	Draw a typical intersection of rural road with a major road with specifications.	6

Q. No.	Module 3	Marks
3.a	What are the requirements of mix design?	3

Answer b or c

b	Describe in detail the construction procedure for fly ash stabilized embankment.	6

c	Discuss on the procedure of lime fly ash stabilization	6

Q. No.	Module 4	Marks
4.a	Determine AADT if lean season traffic is 60 vehicles per day, duration of harvesting season is 30 days and traffic at the peak harvesting season increases by 5 times.	3

Answer b or c

b	Elaborate on the functions of pavement components	6
c	Design a cement concrete pavement for rural roads in Kerala with CVPD 130 over 75 mm thick WBM over 150 mm cementitioussub base.	6

Q. No.	Module 5	Marks
5.a	What are the specifications of material for granular base?	4

Answer b or c

b	Give the specifications of materials for crusher run macadam.	8
c	List out the specifications of materials for Water Bound Macadam.	8

Q. No.	Module 6	Marks
6.a	Explain the evaluation procedure for rigid pavements?	4

Answer b or c

b	Explain the types of maintenance activities of flexible pavement.	8
c	Explain the design procedure for surface dressing.	8