APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

08 PALAKKAD CLUSTER

Q. P. code :TE0819224-I **(pages: 2)** **Name:**

Reg No:

SECOND SEMESTER M.TECH. DEGREE EXAMINATION MAY2019

(Civil Engineering – Transportation Engineering)

Subject id:08CE6224 **INTELLIGENT TRANSPORTATION SYSTEMS**

Time:3 hours **Max. marks: 60**

Answer all six questions. Part 'a' of each question is compulsory.

Answer either part 'b' or part 'c' of each question

Q.no.	Module 1	Marks
1.a	What are the functional requirement of ITS?	3
	Answer b or c	
b	Discuss about electronic fare collection.	6
c	Explain the need of ITS.	6

Q.no.	Module 2	Marks
2.a	What are the different types of VMS?	3
	Answer b or c	
b	What are the various data collection techniques in ATIS?	6
c	Compare vehicle to centre and vehicle to roadside communication.	6

Q.no.	Module 3	Marks
3.a	Explain electronic toll collection system?	3
	Answer b or c	
b	Write short note on i) incident management ii) intelligent speed adaptation	6
c	Elaborate on dynamic metering. Give figures.	6

Q.no.	Module 4	Marks
4.a	Enumerate different ITS system components	3
	Answer b or c	
b	Explain the use of positioning system for ITS applications?	6
C	Describe about the role of GIS in ITS?	6

Q.no.	Module 5	Marks
5.a	What are the characteristics of ideal AHS?	4
	Answer b or c	
b	Write about challenges involved in the implementation of automated highway systems	8
c	Explain sensor requirements of AHS?	8

Q.no.	Module 6	Marks
6.a	Briefly explain collision warning system	4
	Answer b or c	
b	Explain the possibilities of ITS in India	8
c	ITS approach is effective in solving transportation problems. Justify.	8