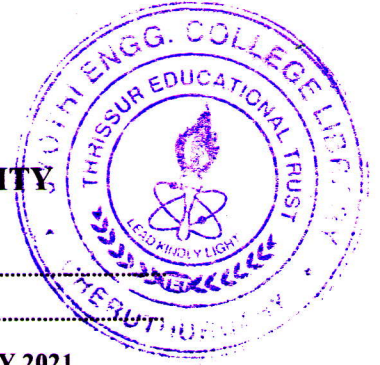


**APJ ABDULKALAM TECHNOLOGICAL UNIVERSITY  
08 PALAKKAD CLUSTER**



Q. P. Code : TE0820311-I

(Pages: 2)

Name: .....

Reg. No: .....

**THIRD SEMESTER M.TECH. DEGREE EXAMINATION FEBRUARY 2021**

**Branch: Civil Engineering**

**Specialization: Transportation Engineering**

**08CE7211 Sustainable Transportation**

**Time: 2 hour 15 minutes**

**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.

<b>Q.no.</b>	<b>Module 1</b>	<b>Marks</b>
<b>1.a</b>	Define Sustainable Transportation.	<b>3</b>

**Answer b or c**

<b>b</b>	Automobiles devour urban space and time. Justify the statement.	<b>6</b>
<b>c</b>	Elucidate how transport and climate change are interrelated.	<b>6</b>

<b>Q.no.</b>	<b>Module 2</b>	<b>Marks</b>
<b>2.a</b>	Explain the concept of costs with reference to sustainable transport.	<b>3</b>

**Answer b or c**

<b>b</b>	Explain how congestion pricing can be used as an effective tool for sustainable transportation.	<b>6</b>
<b>c</b>	Elaborate the various facets of providing subsidies in transport.	<b>6</b>

<b>Q.no.</b>	<b>Module 3</b>	<b>Marks</b>
<b>3.a</b>	Differentiate between urban form and urban structure.	<b>3</b>

**Answer b or c**

<b>b</b>	Planning for sustainable transportation can be achieved based on assessment of specific indicators. Justify the statement elaborating the indicators used in various cases.	<b>6</b>
<b>c</b>	Explain the various design concepts of a sustainable urban form.	<b>6</b>

<b>Q.no.</b>	<b>Module 4</b>	<b>Marks</b>
<b>4.a</b>	Congestion management policies can be thought of as a sustainable transport policy option. Justify the statement.	<b>3</b>

**Answer b or c**

- |          |   |          |
|----------|---|----------|
| <b>b</b> | Elaborate on the citizen participation effort for sustainable transportation with the help of case studies. | <b>6</b> |
| <b>c</b> | Describe how travel demand management can be applied to sustainable transportation.                         | <b>6</b> |

<b>Q.no.</b>	<b>Module 5</b>	<b>Marks</b>
<b>5.a</b>	Explain the use of fuel cells as an alternative towards sustainable transportation.	<b>4</b>

**Answer b or c**

- |          |   |          |
|----------|---|----------|
| <b>b</b> | Discuss the relationship between telecommunications and transportation. Identify ways in which telecommunications might serve sustainable transportation. Identify ways in which telecommunications works against sustainable transportation. | <b>8</b> |
| <b>c</b> | Discuss the possibilities of Intelligent Transportation Systems in sustainable transportation.  | <b>8</b> |

<b>Q.no.</b>	<b>Module 6</b>	<b>Marks</b>
<b>6.a</b>	What is Transit Oriented Development?	<b>4</b>

**Answer b or c**

- |          |  |          |
|----------|--|----------|
| <b>b</b> | Explain how mobility management measures serve as an efficient means of sustainable transportation.  | <b>8</b> |
| <b>c</b> | Discuss your thoughts on the issues, challenges, design concepts to be considered and policy actions associated with pedestrian friendly facilities. | <b>8</b> |