



**APJ ABDULKALAM TECHNOLOGICAL UNIVERSITY**

**08 PALAKKAD CLUSTER**

Q. P. Code: TE0820115-I

(Pages: 2)

Name: .....

Reg. No:.....

**FIRST SEMESTER M.TECH. DEGREE EXAMINATION MARCH 2021**

**Branch: Civil Engineering**

**Specialization: Transportation Engineering**

**08CE6215 Road Safety Engineering**

(Common to TE)

**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>
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<b>1.a</b>	Explain condition and collision diagram for the road accidents?	<b>3</b>
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**Answer b or c**

<b>b</b>	Analyse the trends observed in road accidents data in our nation?	<b>6</b>
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<b>c</b>	Examine the reasons for the increase in the number of accident data of pedestrian and bicycles? Can you suggest any solutions for that?	<b>6</b>
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<b>Q.no.</b>	<b>Module 2</b>	<b>Marks</b>
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<b>2.a</b>	Explain the various stages in road safety approaches?	<b>3</b>
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**Answer b or c**

<b>b</b>	Describe the initiatives taken by our Govt. to improve road and vehicle related measures for the road safety	<b>6</b>
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<b>c</b>	Discuss about road safety improvement strategies in word level?	<b>6</b>
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<b>Q.no.</b>	<b>Module 3</b>	<b>Marks</b>
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<b>3.a</b>	Enumerate the different road sites that accident prediction models can be developed?	<b>3</b>
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**Answer b or c**

<b>b</b>	Explore the different challenges and its solutions faced by road practitioners for applying the crash prediction models	<b>6</b>
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- c Investigate the challenges that can be faced during the data collection of developing models for predicting accidents? 6

**Q.no. Module 4 Marks**

- 4.a Explain the stages involved in road safety auditing process? 3

**Answer b or c**

- b What are the data requirements for RSA? 6
- c How the ranking of hazardous location can be done to implement road safety improvement measures 6

**Q.no. Module 5 Marks**

- 5.a What are the basic information to be obtained on the road for the accident reconstruction? 4

**Answer b or c**

- b Explain different analytic methods to determine the vehicles pre-collision speed for accident reconstruction? 8
- c Describe about intersection characteristics that affect pedestrian safety? 8

**Q.no. Module 6 Marks**

- 6.a What are the different methods to evaluate design consistency 4

**Answer b or c**

- b Explain the effects of design elements of vertical and horizontal alignments on safety? 8
- c Discuss about various roadway and non-roadway, related countermeasure? 8