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Total No. of Questions : 8 ]

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**23234**

**M.Tech. (Civil Engg.) 1st Semester  
Examination, March-2021  
(Transportation Engg.)  
(Elective-III)**

**TRANSPORTATION AND ENVIRONMENT**

**Paper-CE-647**

*Time : Three Hours ]*

*[ Maximum Marks : 100*

*Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.*

*Note :- Attempt any five questions. All questions carry equal marks.*

1. What do you understand by road user characteristics and vehicular characteristics as per IRC guidelines ? Explain them in detail. 20

2. Discuss the environmental impact of transportation on air quality index, noise and in terms of visual intrusion. 20
3. Explain the effect of highway traffic on water quality and also impact on flora and fauna. 20
4. Discuss the various types of pollution and vibration effects on human as well as on buildings. 20
5. What do you understand by EIA in India ? Discuss the role of EIA on highway projects. What is the standard procedure to be followed for assessment of any environmental hazards due to highway projects ? 20
6. (a) What types of vehicular emission parameters are there in environment ?  
(b) What is transport related vision 2020 ? 10,10
7. Explain the various factors affecting fuel consumption of motor vehicles and the energy related aspects of different transport technologies. 20

8. (a) List and explain the EIA practices conducted on Highways.  
(b) What are the road transport related air pollution and sources of air pollution ? 10,10