



GOVERNMENT COLLEGE OF ENGINEERING, JALGAON

(An Autonomous Institute of Government of Maharashtra)

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Name of Examination : **Winter 2020** - (Preview)

Course Code & Course Name : **CE303U - Transportation Engineering**

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Maximum Marks : **60**

Duration : **3 Hrs**

[Edit](#) [Print](#) [View Answer Key](#) [Close](#) **Answer Key Submission Type:** Marking scheme with model answers and solutions of numerical

Instructions:

1. All questions are compulsory. **In all questions a is compulsory and solve any one out of b and c**
2. Illustrate your answer with suitable figures/sketches wherever necessary.
3. Assume suitable additional data; if required.
4. Use of logarithmic table, drawing instruments and non programmable calculators is allowed.
5. Figures to the right indicate full marks.

- 1) a) Briefly explain the engineering survey needed for locating a new highway. [7]
- b) Write a short note on: PMGSY Program. [3]
- c) Calculate the stopping sight distance for a design speed of 84 km / hr, descending grade 2 % assuming the coefficient of friction as 0.42 & total reaction time of drivers as 2.5 seconds. [3]
- 2) a) Describe factors controlling highway alignment. [7]
- b) Write short note :highway lighting. [3]
- c) Write comparison between flexible pavement and rigid pavement. [3]
- 3) a) Describe penetration test for bitumen. [7]
- b) Explain in briefly the desirable properties of a good road aggregate [3]
- c) Explain the construction procedure of W.B.M. road. [3]
- 4) a) Explain traffic characteristics in detail. [7]
- b) What are the advantages & disadvantages of traffic signals. [3]
- c) Explain in short various types of intersection. [3]
- 5) a) Explain superelevation with its advantages, also derive the expression. [7]
- b) Explain in short : Electronic Toll Collection. [3]
- c) Give the essential requirements of a good highway drainage. [3]
 - 6a. Explain bridge bearing and explain any 3 in detail with sketches. (QUESTION OUT OF SYLLABUS HENCE NOT TO BE CHECKED)
 - 6b. Define Afflux, economic span and Linear waterway. (QUESTION OUT OF SYLLABUS HENCE NOT TO BE CHECKED)
 - 6c. What are the different types of foundation used for bridges ? (QUESTION OUT OF SYLLABUS HENCE NOT TO BE CHECKED)

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