Reg.No. \_\_\_\_\_\_\_\_\_\_\_\_

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**End Semester Examination – Nov/Dec – 2018**

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| **Code :** | **14CE2014** | **Duration :** | **3hrs** |
| **Sub. Name :** | **TRANSPORTATION ENGINEERING** | **Max. marks :** | **100** |

**ANSWER ALL QUESTIONS (5 x 20 = 100 Marks)**

**(Tables & Charts for Design of Flexible Pavement may permitted)**

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| **Q. No.** | **Sub Div.** | **Questions** | **Course**  **Outcome** | **Marks** |
| 1. |  | Write short note on a) Jayakar Committee b) Indian Road Congress c) Central Road Fund . | CO1 | 7+7+6 |
| (OR) | | | | |
| 2. |  | Compare the characteristics features of different modes of transportation. | CO1 | 20 |
|  |  |  |  |  |
| 3. | a. | |  | | --- | | Indicate total reaction time of the driver and the factors on which it depends. | | CO1 | 12 |
|  | b. | Explain “PIEV Theory” | CO1 | 8 |
| (OR) | | | | |
| 4. |  | Define super elevation with neat sketch. Enumerate the steps for practical design of super elevation. | CO5 | 20 |
|  |  |  |  |  |
| 5. |  | Explain Flexible and Rigid pavements and bring out the points of difference. Sketch the cross section and show the component parts. | CO4 | 20 |
| (OR) | | | | |
| 6. |  | Calculate the length of transition curve for a design speed of 80kmph at horizontal curve of radius 300 m in a rural area. Assume suitable data. | CO3 | 20 |
|  |  |  |  |  |
| 7. |  | |  |  | | --- | --- | | Draw a typical cross section of a permanent way and indicate its | | | components. Explain various requirements and functions of each | | | components. | | CO2 | 20 |
| (OR) | | | | |
| 8. |  | Design a flexible pavement for a new by pass road for a Two-lane single carriage way of initial traffic in a year of completion of construction is 800 CV/day (sum of both directions). Traffic growth rate per annum is 7.5 percent. Design life of 10 years, with the value of vehicle damage factor is 2.5 (standard axles per commercial vehicle) and design CBR value of sub-grade soil is 6 %. | CO4 | 20 |
|  | |  |  |  |
|  | | **Compulsory**: |  |  |
| 9. | a. | Express the requirements of Harbour. | CO6 | 7 |
| b. | State and explain with neat sketch about the classification of docks. | CO6 | 7 |
| c. | Summarize about Mooring and its types. | CO6 | 6 |