**Set-: I**

**Q. Paper Code:**

**22CE303503**

**** D.Y. PATIL COLLEGE OF ENGINEERING & TECHNOLOGY

KASABA BAWADA KOLHAPUR-416006

**(An Autonomous Institute)**

T. Y. B. Tech (Civil), Sem-V

Seat No:

**END SEMESTER EXAMINATION(ESE), Dec. – 2022**

Course Name: **Highway and Transport Engineering** Course Code: **201CEL303**

Day and Date: Saturday, 10.12.2022

Time 2.00 pm to 4.00 pm  **Max. Marks- 50**

***Instructions:***

1. *Figure to the right indicate full marks.*
2. *Give suitable general Instructions*

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| **BT** | **CO’s** | **Q. No.** |  | | **Marks** |
|  |  | **Q.1** | **All Questions are compulsory** | | **20** |
| **3** | **CO1** | **a** | Explain the factors Affecting Alignment of Road. |  | **6M** |
| **3** | **CO1** | **b** | Design the rate of super elevation by IRC method for horizontal curve of radius 500 m and speed 90kmph. | **7 M** |
| **3** | **CO2** | **c** | Enlist various tests on bitumen and explain any two in detail. | **7 M** |
|  | | | | | |
|  |  | **Q.2** | **All Questions are compulsory** | | **10** |
| **3** | **CO2** | **a** | Explain the factors affecting pavement design. |  | **6** |
| **3** | **CO2** | **b** | Write a difference between rigid and flexible pavement.  **OR**  Explain the various types of joints in rigid pavement. | **4** |
|  | | | | | |
|  |  | **Q.3** | **All Questions are compulsory** | | **10** |
| **2** | **CO3** | **a** | Explain in detail premix method Bituminous Macadam or Bitumen Bound Macadam  **OR**  Explain process of cement concrete pavement construction. |  | **6** |
| **2** | **CO3** | **b** | Explain the process of Sub grade and sub base construction with MORTH specifications. | **4** |
|  | | | | | |
|  |  | **Q.4** | **Attempt any two out of three questions** | | **10** |
| **2** | **CO4** | **a** | Define Traffic Volume, Traffic Density, Traffic capacity and PCU. |  | **5** |
| **2** | **CO4** | **b** | Explain traffic volume study and speed studies. | **5** |
| **2** | **CO4** | **C** | Explain the types of intersection in detail. | **5** |

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