T.Y civil.

**DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE**

**Mid Semester Examination – Sept./Oct. 2019**

**Course: B. Tech in _CIVIL ENGINEERING** **Sem: V**

**Subject Name: Transportation Engineering** **Subject Code:** BTCVC505

**Max Marks:20** **Date:-25/09/2019** **Duration:- 1 Hr.**

**Instructions to the Students:**

1. **All Questions are compulsory.**
2. Draw neat and clean diagram if necessary.
3. Assume suitable data wherever necessary

| | | Level BT | CO BTCVC 505. | Marks |
|---|---|---|---|---|
| Q.1 | **Answer in one sentence (All Questions carry equal marks)** | | | 6 |
| | **1. What is Cross Slope or Camber** | 1 | 3 | |
| | **2. How much should be the Width of pavement or carriageway?** | 1 | 3 | |
| | **3. Define reaction time of driver** | 1 | 3 | |
| | **4. Define super elevation** | 1 | 3 | |
| | **5. what is Stopping sight distance** | 1 | 3 | |
| | **6. Enlist various types of tests on Aggregates** | 1 | 2 | |
| | | | | |
| Q.2 | **Solve Any Two of the following.** | | | 3 X 2 |
| (A) | **Discuss classification of roads as per Nagpur road plan.** | 2 | 1 | |
| (B) | **Explain PIEV theory in detail** | 2 | 3 | |
| (C) | **Write short note on Shape test of aggregates (flakiness index and Elongation index)** | 2 | 3 | |
| | | | | |
| Q. 3 | **Solve Any One of the following.** | | | 8 |
| (A) | **The speed of overtaking and overtaken vehicles are 70 and 40 kmph, respectively on a two-way traffic road. The average acceleration during overtaking may be assumed as 0.99 m/sec$^2$. Calculate safe overtaking sight distance and minimum length of overtaking zone ?** | 3 | 3 | |
| (B) | **A national highway passing through rolling terrain in heavy rain fall area has a horizontal curve of radius 500 m. Design the length of transition curve assuming suitable data.** | 3 | 3 | |
| | | | | |
| | ***** End ***** | | | |