



DIPLOMA IN CIVIL ENGINEERING

CENTRALIZED QUESTION BANK

4010652 - Highway Engineering Laboratory

**DIRECTORATE OF TECHNICAL
EDUCATION GOVERNMENT OF
TAMILNADU**

DIPLOMA END SEMESTER / YEAR EXAMINATION – 2023

Course: Civil Engineering

Subject : Highway Engineering Laboratory

QP Code : 4010652

Time : 3 Hours

Date :

Session:

Max Marks: 100

Answer the Following Question

1. Draw the sketches showing standard cross sections of a) Expressways b) freeways
c) National Highway and d) MDR

(95 Marks)
2. A) Determine the Flakiness index of given aggregate sample and comment whether the index falls within the specified limit.

(50 Marks)

B) Determine the Elongation index of given aggregate sample and comment whether the index falls within the specified limit.

(45 Marks)
3. Find the Angularity Number of given aggregates sample

(95 Marks)
4. Determine the abrasion value of given aggregate sample using Los Angeles Abrasion testing machine.

(95 Marks)
5. Determine the Softening point of given bitumen sample.

(95 Marks)
6. Find out the Penetration value of given bitumen sample.

(95 Marks)
7. Determine the Ductility value of given bitumen sample.

(95 Marks)
8. State the defects of roads and suggest remedial measures to rectify the defects.

(95 Marks)
9. Name the components of hill roads and explain them.

(95 Marks)
10. Explain the drainage condition of flexible or rigid pavement.

(95 Marks)