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Sr. No. 002519

December 2023

B.Tech(Civl) - ~~B.Tech.~~ V SEMESTER ~~regular~~
Transportation Engineering Concepts (PCC-CE307R)

Time: 3 Hours

Max. Marks:75

- Instructions:**
1. It is compulsory to answer all the questions (1.5 marks each) of Part -A in short.
 2. Answer any four questions from Part -B in detail.
 3. Different sub-parts of a question are to be attempted adjacent to each other.

PART -A

- Q1 (a) Define highway alignment. (1.5)
(b) Name any five current road projects in India? (1.5)
(c) Define sight distance. (1.5)
(d) What is horizontal alignment? (1.5)
(e) What do you understand by road intersections? (1.5)
(f) Define highway lightening. (1.5)
(g) What do you mean by bituminous binders? (1.5)
(h) Enlist the various test required for the rigid pavements. (1.5)
(i) Name the IRC code used for construction of flexible and rigid pavement. (1.5)
(j) Differentiate flexible and rigid pavement. (1.5)

PART -B

- Q2 (a) Explain various road development plans of India. (10)
(b) Give detailed explanation for classifications of highways. (5)
- Q3 (a) Derive an expression for Superelevation. (5)
(b) What do you understand by sight distance also derive the expression for stopping and overtaking sight distance for 3% gradient. (10)
- Q4 Explain each and every test required for the different types of pavements? (15)
- Q5 (a) What are the traffic regulation and control explain them. (5)
(b) What do you understand by traffic engineering studies also explain the any three studies. (10)
- Q6 (a) What are the factors affecting design and performance of flexible and rigid pavements? (10)
(b) Discuss about the desirable properties of materials used in pavements. (5)
- Q7 What are the design criteria for flexible and rigid pavement as per IRC guidelines? (15)

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