BTS(C) – V– 09 – 055 - K

B. Tech Degree V Semester Examination, November 2009

CE 505 (A) TRANSPORTATION ENGINEERING I

(2006 Scheme)

Time : 3 Hours | Maximum Marks : 100

PART A

(Answer all questions)

(8 x 5 =40)

I. a. Where and why super elevation is provided in highways?
b. Explain stopping, passing and overtaking sight distances.
c. Explain carriage way markings.
d. What is a traffic island? What are its functions?
e. Explain what is meant by WBM road.
f. What are the factors to be considered in the design of pavements?
g. What are the factors controlling the size and number of gate positions?
h. How are airports classified?

PART B

(4 x 15 =60)

II. Calculate the stopping sight distance on a highway at a descending gradient of 2% for a design speed of 80 kmph. Assume other data as per IRC recommendations. (15)

OR

III. Calculate the extra widening required for a pavement of within 7m on a horizontal curve of radius 250m if the longest wheel base of vehicle expected on the road is 7m. Design speed is 70kmph. Compare the value obtained with IRC recommendations. (15)

IV. How is traffic volume study conducted? How is traffic volume data sorted out and presented for analysis? (15)

OR

V. What are the various traffic islands used? Explain the uses of each. (15)

VI. Explain the various types of failures and their causes in flexible and rigid pavements. (15)

OR

VII. Explain the desirable properties of aggregate to be used in different types of pavement construction. (15)

VIII. What are the different parking configurations for an aircraft? Explain the merits and demerits of each method of parking. (15)

OR

IX. Explain the basic difference between airport and highway pavements. Discuss in brief the various factors to be considered in the design of airport pavements. (15)

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