

Reg. No. _____

Karunya University

(Declared as Deemed to be University under Sec.3 of the UGC Act, 1956)
(Anna University batch)

End Semester Examination – November / December 2008

Subject Title: HIGHWAYS AND RAILWAYS ENGINEERING
Subject Code: CE264

Time : 3 hours
Maximum Marks: 60

Answer ALL questions

PART – A (10 x 1 = 10 MARKS)

1. What is CRR1?
2. What are the factors influencing the selection of highway alignment?
3. Define perception time..
4. Write down the expression for stopping sight distance?
5. Define CBR.
6. Give any two examples for rigid pavements.
7. Define gauge.
8. Enumerate any two types of materials used as ballest in permanent way.
9. What is marshalling yard?
10. Differentiate Yard and junction.

PART – B (5 x 2 = 10 MARKS)

11. Explain obligatory points using sketches.
12. Why super elevation is introduced in horizontal curves?
13. Compare rigid and flexible pavements.
14. Briefly explain about creep of rails.
15. Explain the locational signals.

PART – C (5 x 8 = 40 MARKS)

16. Describe in detail the preliminary survey conducted for highway alignment.
(OR)
17. Draw a neat sketch of the cross section of a four lane urban road and indicate the geometric elements.
18. Derive the expression for the super elevation.
(OR)
19. Explain with neat illustrations about the various types of gradients adopted in practice.
20. Explain the design procedure of flexible pavements.
(OR)
21. List the different types of stresses in rigid pavements. Discuss the combination of these stresses.
22. Describe in detail about the various components of permanent way and their classifications.
(OR)
23. Write detailed notes on the following: (4+2+2)
a. Sleeper density b. Functions of ballest c. Types of rails
24. a. Describe about Point and crossings in detail. (5)
b. Briefly describe about track circulating. (3)
(OR)
25. Explain in detail about any four-train control systems in practice.