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B.E / B.Tech (Part Time) DEGREE END SEMESTER EXAMINATIONS, NOV / DEC 2013

CIVIL ENGINEERING

V Semester

PTCE 9043 PAVEMENT MANAGEMENT SYSTEMS

(Regulation 2009)

Time: 3 Hours

Answer ALL Questions

Max. Marks 100

PART-A (10 x 2 = 20 Marks)

1. Draw the cross section of a conventional bituminous concrete pavement.
2. List the precautions to be taken while applying systems methodology in PMS.
3. What is meant by pavement serviceability?
4. Define "Roughness"
5. State the classification of physical design inputs.
6. What are the major recurring costs considered by a public agency in the economic evaluation.
7. Define 'Modified Structural Number'
8. What are the limitations of CRRl models?
9. What is meant by mud-pumping?
10. Distinguish between routine maintenance and special maintenance of pavements.

Part – B (5 x 16 = 80 marks)

11. With a flow chart, explain the role of pavement investment planning.
12. a) Explain any two methods of measuring roughness and their major features. How the correlation of outputs between various roughness measuring devices is usually done?

OR

b) With example, explain the principal components of pavement condition surveys.
13. a) With block diagram, describe the various components of pavement design system.

OR

b) Explain the environmental variables affecting pavement behaviour and performance.
14. a) Suggest a procedure for developing a potholes prediction model for your locality.

OR

b) Describe the explanatory variables used in HDM-4 roughness model.
15. a) What are the causes of skidding of cement concrete pavements? Explain the remedial measures.

OR

b) Describe the systems methodology for the maintenance of a rural flexible pavement.