F 3553 (Pages : 2) Reg. No.....

Name.....

B.TECH. DEGREE EXAMINATION, NOVEMBER 2014

Eighth Semester

Branch : Civil Engineering

HIGHWAY AND AIR FIELD PAVEMENTS (Elective II) (C)

(Old Scheme—Prior to 2010 Admissions)

[Supplementary/Mercy Chance]

Time : Three Hours Maximum : 100 Marks

Part A

Answer **all** *questions.*
Each question carries 4 *marks.*

1. What is stability of pavement ?
2. Explain the effect of repetitions of load.
3. Explain Burmister's layer theory.
4. What are the advantages of group index method ?
5. Write a note on rigid pavements.
6. Write a note on working stress.
7. Explain functional stress.
8. Write a note on IRC recommendations.
9. Describe skid resistance.
10. What is Benkelman beam test ?

(10 × 4 = 40 marks)

Part B

Answer **all** *questions.*
Each question carries 12 *marks.*

11. (a) Explain the factors affecting and factors considered in pavement design.

Or

(b) (i) Explain the difference between flexible and rigid pavements. (ii) Write notes on elastic modulii.

12. (a) Explain CBR method of pavement design. Explain its advantages and limitations.

Or

(b) Explain the difference between McLaud method and group index method.

Turn over

13. (a) What are design considerations in rigid pavements design? Explain the significance of radius of relative stiffness.

Or

(b) Explain the calculation of Bradbury's stress coefficients. Explain how stress at different points are calculated using Westergaards stress equations

14. (a) (i) Explain Westergaards concept of temperature stress on pavements. (ii) Explain Wrapping stress.

Or

(b) Distinguish between the design of dowel bars and tie bars.

15. (a) Explain environmental influence and effects on pavements.

Or

(b) Write short notes on (i) overlays ; (ii) Maintenance management system ; (iii) pavement distress.

(5 × 12 = 60 marks)