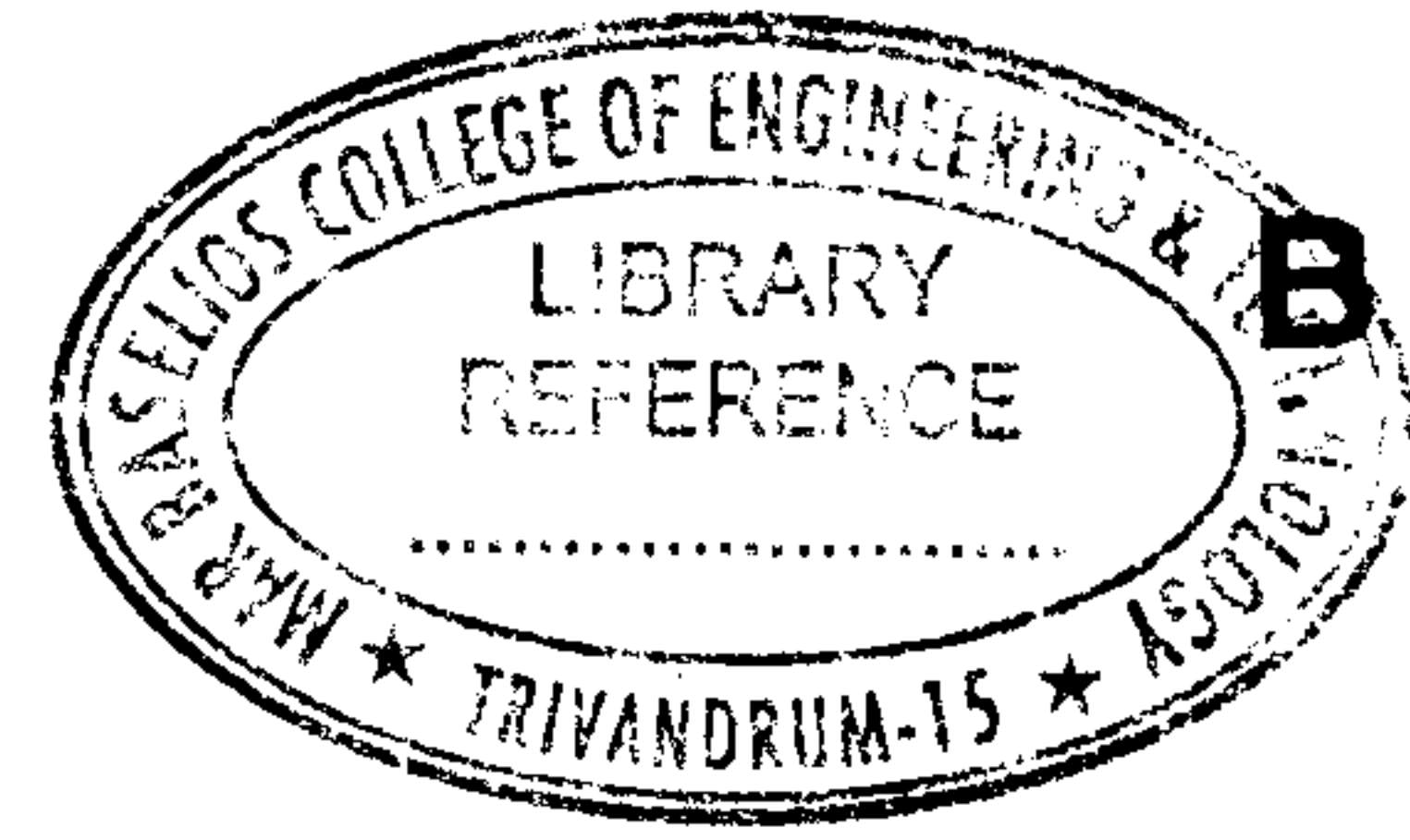




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B – 5255

Reg. No. :

Name :

**Seventh Semester B.Tech. Degree Examination, February 2017
(2008 Scheme)
08.705.11 : Elective – III : HIGHWAY AND AIRFIELD
PAVEMENT MATERIALS (C)**

Time : 3 Hours

Max. Marks : 100

Instruction : Answer *all* questions from Part – A and *one full* question from *each* Module in Part – B.

PART – A

1. Briefly explain with neat sketches the component layers of pavement.
2. Enumerate desirable properties of aggregate for road construction.
3. Write short note on modified binders.
4. What are the desirable properties of bituminous mixes ?
5. Write note on creep test on bituminous mix.
6. What are the requirements of concrete pavements ?
7. Write brief note on recycled pavements.
8. Explain constitutive model for linearized visco-elastic behaviour of bitumen.

(8×5=40 Marks)

PART – B

Module – 1

9. a) What is grading of aggregate ? Explain the different methods of grading. **10**
b) Explain the test procedure of abrasion resistance of road aggregates and its practical significance. **10**
- OR**
10. a) What are different constitutive models of soil and explain any model. **10**
b) Describe any subgrade soil test procedure and its significance in pavement construction. **10**

P.T.O.



Module – 2

11. a) What are the requirements of bitumen for pavement construction ? 10
b) Describe the performance grading of binders. Explain super pave gyratory compaction procedure for preparation of samples for mix design. 10
- OR
12. a) Write brief note on aging of bitumen. 10
b) Explain the procedure of Marshal Mix design. 10

Module – 3

13. a) Explain hot mix and cold mix recycling of asphalt pavements. 10
b) Explain the procedure for concrete mix design for road construction as per IRC guidelines. 10
- OR
14. a) Explain different methods of soil stabilization methods. 10
b) Explain various tests on Portland cement concrete for pavement constructions. 10
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