

8. (a) Explain the requirements and importance of highway drainage.
- (b) With sketch explain the special geometric design standards of hair pin bends. 7+8

No. of Printed Pages : 04

Roll No.

18BB1707

M. Tech. EXAMINATION, May 2019

(Second Semester)

(C Scheme) (Main Only)

CE(HSE)

CEH572C

Pavements Material, Construction and
Maintenance

Time : 3 Hours]

[Maximum Marks : 75

Before answering the question-paper candidates should ensure that they have been supplied to correct and complete question-paper. No complaint, in this regard, will be entertained after the examination.

Note : Attempt *Five* questions in all, selecting at least *one* question from each Unit. All questions carry equal marks.

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Unit I

1. List all types of tests performed on road aggregates. Explain any *two* in detail with neat sketches. **15**
2. What do you understand by stabilization of soil ? Explain bituminous materials, cementing agents and chemical stabilizers in detail. **15**

Unit II

3. Write short notes on any *three* of following :
 - (a) Penetration Test
 - (b) Viscosity Test
 - (c) Softening Point Test
 - (d) Specific Gravity Test. **15**
4. (a) What are the desirable properties of bituminous mixes ?
(b) Explain briefly the Marshall method of bituminous mix design. **7+8**

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Unit III

5. (a) Write short notes on the following Construction Joints:- **8**
 - (i) Without Dowel Bars
 - (ii) With Dowel Bars.
- (b) Expansion the function of joints with dowel bar for load transfer. **7**
6. What is the significance of Prime Coat, Tack Coat, Seal Coat and surfacing dressing ? **15**

Unit IV

7. Write notes on the following : **15**
 - (a) Skid Resistance
 - (b) Sub-surface drainage
 - (c) Periodic Maintenance
 - (d) Special Maintenance
 - (e) Strengthening.

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