LPCET LIBRARY BANGALORE-49

CBCS SCHEME

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21CV733

Seventh Semester B.E./B.Tech. Degree Examination, June/July 2026
Pavement Materials and Construction

Time: 3 hrs. Max. Marks: 100

Note: ***Answer any FIVE full questions, choosing ONE full question from each module.***

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.

Module-1

1 a. Explain the desirable properties of aggregate to be used in different types of pavement construction. **(10 Marks)**

b. Explain aggregate crushing test with neat sketch and mention the permissible value recommended. **(10 Marks)**

OR

2 a. Explain the desirable properties of Bitumen. **(10 Marks)**

b. Explain aggregate blending to meet to specified gradation. **(10 Marks)**

Module-2

3 a. Explain the mechanical properties of bituminous mixes. **(10 Marks)**

b. Explain in detail direct Marshal mix design. **(10 Marks)**

OR

4 a. Explain Roth Futch's method with a graph using for gradation of aggregates. **(10 Marks)**

b. What are stripping of bitumen and briefly explain the mechanism of stripping. **(10 Marks)**

Module-3

5 a. Write a short notes on admixtures and list advantages and disadvantages. **(10 Marks)**

b. Explain the usage of Flyash in concrete and mention limitations. **(10 Marks)**

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OR

6 a. Explain the following : i) RAP ii) RCA. **(10 Marks)**

b. Explain the material required for DLC and PQC with advantages and limitation and permissible value. **(10 Marks)**

Module-4

7 a. Explain different types of compacting equipment used for pavement construction. **(10 Marks)**

b. Explain with neat sketch, pocod shovel and its applications and operations. **(10 Marks)**

OR

8 a. List the types to equipment required for Bitumen pavement construction and explain any two of them? **(10 Marks)**

b. Explain in detail quality control tests conducted for preparation of subgrade. **(10 Marks)**

Module-5

9 a. Explain in detail to specification and construction of Flexible Pavement (WBH) **(10 Marks)**

b. Explain the construction steps for Rigid pavement. **(10 Marks)**

OR

10 a. Explain the following with specifications : i) PQC ii) DLC **(10 Marks)**

b. Explain in detail the types of joint used in rigid pavement and explain any two in detail. **(10 Marks)**

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