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10CV763

Seventh Semester B.E. Degree Examination, Dec.2019/Jan.2020
Pavement Materials & Construction

Time: 3 hrs.

Max. Marks:100

Note: Answer FIVE full questions, selecting at least TWO questions from each part.

PART - A

- 1 a. Explain the desirable properties of road aggregates. (08 Marks)
b. List the various tests on road aggregates. Describe the laboratory procedure for determination of aggregate impact test of road aggregates. (12 Marks)
- 2 a. Explain the desirable properties of Bitumen. (08 Marks)
b. List the various tests on Bitumen. Describe the laboratory procedure for determination of ductility test on bitumen. (12 Marks)
- 3 a. Explain different types of emulsions and cutback. (10 Marks)
b. Explain the static immersion test, used to evaluate adhesion failure of bitumen in the presence of water. (10 Marks)
- 4 a. Explain the volumetric and mechanical properties of Marshall specimens. (12 Marks)
b. List important advantages of MAC surfacing. (08 Marks)

PART - B

- 5 a. Explain with neat sketches the working principle of,
(i) Power shovel. (12 Marks)
(ii) Dragline (08 Marks)
b. Write a note on rollers used in road construction. (08 Marks)
- 6 a. Describe the construction method and quality control tests in subgrade. (10 Marks)
b. Explain the desirable properties of subgrade soil and tests on subgrade soil. (10 Marks)
- 7 a. Explain the step by step procedure in the construction of Bituminous pavement. (12 Marks)
b. Explain the suitability of WBM. (08 Marks)
- 8 a. Write a note on various types of joints used in cement concrete loads. (any two) (10 Marks)
b. Explain the construction procedure for cement concrete pavements. (10 Marks)

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.

13 FEB 2020