

APJ ABDULKALAM TECHNOLOGICAL UNIVERSITY

08 PALAKKAD CLUSTER



Q. P. Code: TE0822204-I

(Pages: 2)

Name:

Reg. No:

SECOND SEMESTER M.TECH. DEGREE EXAMINATION JULY 2022

Branch: Civil Engineering

Specialization: Transportation Engineering

08CE6204 Pavement Construction, Evaluation and Maintenance

(Common to TE)

Time: 3 hours

Max. Marks: 60

Answer all six questions.

Modules 1 to 6: Part 'a' of each question is compulsory and answer either part 'b' or part 'c' of each question.

Q. No.	Module 1	Marks
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1. a Explain the choice of stabilizer for soil stabilization with examples.

3

Answer b or c

b Explain the chemical method of stabilization which would be preferred for subgrade soil with high amount of clay fraction.

6

c Explain the construction procedure of cement stabilized subgrade.

6

Q. No.	Module 2	Marks
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2. a Write a note on rollers in construction.

3

Answer b or c

b Describe the construction and quality control tests in subgrade.

6

c Briefly describe the quality control tests used in construction of concrete pavements.

6

Q. No.	Module 3	Marks
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3. a List out the advantages and limitations of interlocking concrete pavement.

3

Answer b or c

b Explain the various functions performed by geosynthetics in transportation. Give neat diagrams

6

- c Write in detail about the Super pave mix design. What are the advantages of super pave method over existing mix design method? 6

Q. No. Module 4 Marks

4. a List out the distresses in flexible pavement and give their respective causes. 3

Answer b or c

- b Explain the evaluation of any three distresses in flexible pavement. 6
c Explain Shahin's deduct value method to determine PCI. 6

Q. No. Module 5 Marks

5. a Differentiate between functional and structural evaluation of pavements. 4

Answer b or c

- b Write a detailed note on Bump Integrator with diagram. 8
c Enumerate overlay design by Benkelman beam deflection studies. 8

Q. No. Module 6 Marks

6. a Write in detail the various pavement deterioration models in PMS 4

Answer b or c

- b Distinguish between routine maintenance and special maintenance of pavements. 8
c Preventive maintenance is the economically better maintenance measure for a flexible pavement. Justify with the help of a neat diagram. 8