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Reg No.: _____

Name: _____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

Fourth Semester B.Tech (Hons) Degree Examination July 2021 (2019 admission)



Course Code: CET294

Course Name: PAVEMENT CONSTRUCTION AND MANAGEMENT

Max. Marks: 100

Duration: 3 Hours

PART A

(Answer all questions; each question carries 3 marks)

		Marks
1	Identify the characteristics of pavements.	3
2	What are the requirements of bituminous materials?	3
3	Name the different types of bitumen mixes.	3
4	Explain flexibility of bitumen mix.	3
5	Draw and explain typical layers of flexible pavements.	3
6	Differentiate CBR and Elastic modulus.	3
7	Differentiate joined concrete pavements and roller compacted pavements.	3
8	Discuss the disadvantages of rigid Pavements.	3
9	Define pavement management system.	3
10	What are the types of PMS data?	3

PART B

(Answer one full question from each module, each question carries 14 marks)

Module -1

11	a) Analyze different layers of flexible and rigid pavements with neat figure.	7
	b) Explain requirements of a pavement.	7
12	a) Evaluate different forms of bitumen.	7
	b) Illustrate properties of road aggregate.	7

Module -2

13	Differentiate between penetration layer section and pavement aggregate section.	14
14	Evaluate different bituminous mix design sections.	14

Module -3

15	Explain the method of preparation of mix and construction steps for laying bituminous macadam base course.	14
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- 16 Evaluate the equipments used for construction and quality control for flexible pavements. 14

Module -4

- 17 a) Distinguish different joints in rigid pavements with neat sketch. 7
b) Explain how the method of pre stressing can be applied to concrete pavements and discuss the salient features of such pavements. 7
- 18 a) Analyze different concrete paving types. 7
b) Evaluate different mix designs for concrete pavements. 7

Module -5

- 19 Evaluate PMS methodologies and compare with present system followed in our country. 14
- 20 a) Enumerate and explain network performance, programmes and project levels. 8
b) Explain life cycle cost analysis. 6
