

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

Scheme for Valuation/Answer Key

Scheme of evaluation (marks in brackets) and answers of problems/key

EIGHTH SEMESTER B.TECH DEGREE EXAMINATION, MAY 2019

Course Code: CE464

Course Name: REINFORCED SOIL STRUCTURES AND GEO - -SYNTHETICS

Max. Marks: 100

Duration: 3 Hours

PART A

Answer any two full questions, each carries 15 marks.

		Marks
1	a) Historical applications	(5)
	b) Any 5 types of geosynthetics	(5)
	c) Advantages + Disadvantages	(3+2=5)
2	a) Creep and long-term performance of geosynthetics.	(3+4=7)
	b) Any 4 physical properties of geosynthetics	(4x2=8)
3	a) Any three factors that affect the performance and behaviour of reinforced soil	(3x3=9)
	b) Functions of geosynthetics	(6)

PART B

Answer any two full questions, each carries 15 marks.

4	a) Explanation + Figure (each case)	(4+4=8)
	b) Mechanism + Figure	(4+3=7)
5	a) Tie back wedge analysis and Coherent gravity analysis with detailed figures.	(5+5=10)
	b) Any 5 benefits of using Geo-synthetics in pavements	(5)
6	a) Figure	(1)
	Check for sliding	(3)
	Check for overturning	(3)
	Check for bearing	(3)
	b) Concept of expanding soil mass	(5)

PART C

Answer any two full questions, each carries 20 marks.

7	a) Assumptions with neat sketches	(8)
	b) Advantages and disadvantages of natural geotextiles	(4+3=7)
	c) Any 5 potential uses of coir geotextiles	(5)



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| 8 a) Explanation + Figure | (5+5=10) |
| b) Applications with brief explanations | (10) |
| 9 a) Explanation + Labelled diagram | (5+5=10) |
| b) Different types of erosion control products | (5+5=10) |

