

Code: 20CE6601

III B.Tech - II Semester – Regular Examinations - APRIL 2024

**ADVANCED PAVEMENT MATERIALS
(HONORS in CIVIL ENGINEERING)**

Duration: 3 hours

Max. Marks: 70

Note: 1. This paper contains questions from 5 units of Syllabus. Each unit carries 14 marks and have an internal choice of Questions.

2. All parts of Question must be answered in one place.

BL – Blooms Level

CO – Course Outcome

			BL	CO	Max. Marks
UNIT-I					
1	a)	Draw the structure of pavement. Explain the functions of different components of pavement structure.	L3	CO1	7 M
	b)	Explain the significance ESWL in pavement design.	L2	CO1	7 M
OR					
2	a)	Describe the factors affecting pavement performance.	L2	CO1	7 M
	b)	Discuss the need for material characterization.	L1	CO1	7 M
UNIT-II					
3	a)	Explain the compaction properties of soil.	L2	CO2	7 M
	b)	How the strength of the soil is determined using CBR test. Explain in detail.	L3	CO2	7 M

OR					
4	a)	Explain the classification of soil.	L2	CO2	7 M
	b)	Define stabilization. Discuss about the soil-cement stabilization.	L1	CO2	7 M
UNIT-III					
5	a)	Describe the Gradation properties of aggregates.	L2	CO3	7 M
	b)	Explain the factors affecting the recycled aggregates.	L2	CO3	7 M
OR					
6	a)	List out various tests on aggregate. Discuss any one test on aggregates.	L2	CO3	7 M
	b)	What are the various factors affecting performance of unbound aggregate layers?	L2	CO3	7 M
UNIT-IV					
7	a)	What are the applications of geotextiles?	L2	CO4	7 M
	b)	Discuss the functions of geocomposites.	L1	CO4	7 M
OR					
8	a)	What is geomembrane? Describe the applications of geomembrane in pavement construction.	L2	CO4	7 M
	b)	Explain the geogrid functions and applications in brief.	L2	CO4	7 M
UNIT-V					
9	a)	Explain the application of fly ash.	L2	CO5	7 M

	b)	Discuss the function of GGBS in pavement construction.	L1	CO5	7 M
OR					
10	a)	What are the applications of quarry dust?	L2	CO5	7 M
	b)	Explain the functions of rice husk dust.	L2	CO5	7 M