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DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

Mid Semester Examination – Sept./Oct. 2019

Course: B. Tech in Civil Engineering **Sem: V**

Subject Name: Soil Mechanics **Subject Code: BTCVC 503**

Max Marks: 20 **Date:-24/09/2019** **Duration:- 1 Hr.**

Instructions to the Students:

1. All questions are compulsory.
2. Assume suitable data if necessary.

		(Level/CO)	Marks
Q. 1	**Answer the following**		6
	1. Lacustrine soil is…. a) soil deposited in sea b) Windblown deposit c) Soil deposited in lake d) soil formed by vegetation matter	L1 / CO 1	
	2.For a given soil, following unit weight remains constant a) Y b) Y_b c) Y_{sat} d) Y_s	L1 / CO 1	
	3.Due to remoulding of clay, the strength … a) decreases b) increases c) remains constant d) none	L1 / CO 1	
	4.At shrinkage limit,degree of saturation is- a) 0% b) 50% c) 75% d) 100%	L1 / CO 1	
	5.The biggest size of clay particle is… a) 0.0002 mm b) 0.002 mm c) 0.02 mm d) 0.075 mm	L1 / CO 1	
	6.With the rise of temperature, permeability .. a)increases b) decreases c) remains constant d) none	L1 / CO 1	
Q.2	**Solve Any Two of the following.**		3 X 2
(A)	Explain void ratio, porosity and prove that $n = e / (1+e)$	L2 / CO 1	
(B)	Explain constant head permeability test with neat sketch.	L2 / CO 1	
(C)	The void ratio and specific gravity of soil sample are 0.65 and 2.65 resp., while voids are 90% saturated. Find bulk density, dry density and water content.	L2 / CO 1	
Q. 3	**Solve Any One of the following.**		8
(A)	What is coefficient of permeability? Derive the equation for average permeability perpendicular to bedding plane.	L3 / CO 1	
(B)	Explain three phase system of soil and prove that $Y_d = GY_w / (1 + e)$	L3 / CO 1	

***** End *****