Name. _____	**Printed Pages:01**
Student Admn. No.: _____	

School of Engineering
Department of Civil Engineering
Backlog Examination, June 2023

[Programme:B.Tech Civil Engg] [Semester: IV] [Batch:]

Course Title: Advanced Geotechnical Engineering	**Max Marks: 100**
Course Code: BTCE3020	**Time: 3 Hrs.**

Instructions:
1. *All questions are compulsory.*
2. *Assume missing data suitably, if any.*

		K Level	COs	Marks
	SECTION-A (15 Marks) 5 Marks each			
1.	Discuss on the settlement of shallow foundations.	K2	CO1	5
2.	Explain various kinds of retaining wall	K2	CO2	5
3.	Infer the forces acting on a well foundation	K2	CO3	5
	SECTION-B (40 Marks) 10 Marks each			
4.	Describe the conditions when the earth pressure is at rest.	K2	CO1	10
5.	Discuss the dynamic and static formulae for determining the load carrying capacity of piles	K3	CO2	10
6.	Explain the experimental procedure of static cone penetration test with neat sketches and charts	K3	CO3	10
7.	Design a mat or raft footing with the required procedures and figures OR Illustrate the details and construction of under reamed pile foundations	K4	CO4	10
	SECTION-C (45 Marks) 15 Marks each			
8.	Derive the active earth pressure of cohesive soils with appropriate figures	K4	CO3	15
9.	Explain the technical procedure for pile load test with neat figure	K5	CO4	15
10	Explain cantilever sheet piling in granular soils with neat sketches OR Design the anchored bulkhead by using free earth method in a granular soil	K5	CO5	15