



BRAINWARE UNIVERSITY

Term End Examination 2023-2024 Programme – B.Tech.(CE)]-2021 Course Name – Foundation Engineering Course Code - PCC-CE602 (Semester VI)

Full Marks: 60 Time: 2:30 Hours
[The figure in the margin indicates full marks. Candidates are required to give their answers in their

own words as far as practicable.]

Group-A (Multiple Choice Type Question) 1 x 15=15 Choose the correct alternative from the following: (i) Select the correct answer for the blank: is generally considered unsuitable for construction due to its high compressibility. a) Sandy soil b) Silty soil c) Clayey soil d) Loamy soil (ii) Select the correct answer for the blank :_ _____ is the primary purpose of a soil investigation report. a) To provide recommendations for soil b) To document the findings of a soil conservation exploration program c) To estimate the cost of soil remediation d) To analyze the economic value of soil resources (iii) Select the correct answer for the blank: is not a common problem encountered during soil exploration. a) Soil erosion b) Soil enrichment c) Soil liquefaction d) Soil consolidation (iv) Select the correct answer for the blank: is not used to collect soil samples during exploration. a) Split spoon sampler b) Cone penetration test c) Shelby tube sampler d) Rotary auger (v) Select the correct answer for the blank: Terzaghi method for analyzing bearing capacity considers a) Soil cohesion only b) Soil friction angle only c) Both soil cohesion and soil friction angle d) Soil permeability (vi) Select the correct answer for the blank :Tension piles are primarily used for a) Resisting compression forces b) Resisting uplift forces

d) None of these

c) Resisting lateral forces

(vii) Select the correct answer for the	blank :The Elastic Continuum Approach is commonly	
used in analyzing	 b) Laterally loaded piles	
a) Tension pilesc) Under reamed piles	d) Caissons	
(viii) Select the correct answer for the	blank :Pile deflection is primarily governed by	
a) Pile material	b) Pile diameter	
c) Pile length d) Pile spacing (ix) Select the correct answer for the blank :The behavior of laterally loaded piles ca		
analyzed using a) Elastic continuum approach	an all and an alueic	
c) Limit equilibrium method	d) None of this	
(x) Select the correct answer for the l	blank :Under reamed piles are particularly effective in	
a) Loose soils	b) Cohesive soils	
c) Granular soils	d) None of this	
(xi) Choose the correct answer for the stability.	blank : relies on its weight for	
a) Cantilever retaining wall	b) Gravity retaining walld) Sheet pile retaining wall	
c) Counterfort retaining wall	d) Sheet pile retaining wall	
(XII) Choose the correct answer for the walls involve the determination of	blank:Earth pressure computations for retaining	
a) Wind loads	b) Water pressure	
c) Soil pressure	d) Temperature effects	
(xiii) Choose the correct answer for the affected by	blank: The stability of a retaining wall is primarily	
a) Soil type and slope	b) Wall height and thickness	
c) Ambient temperature	d) Structural material	
(xiv) Choose the correct answer for the structures.	blank : is more suitable for tall	
a) Cantilever retaining wall	b) Gravity retaining wall	
c) Counterfort retaining wall	d) Sheet pile retaining wall	
(xv) Choose the correct answer for the on	blank :Anchored sheet piling relies 	
a) The weight of the soil	b) Additional structural support	
c) Gravity	d) None of this	
	Group-B	
(Sho	ort Answer Type Questions)	3 x 5=15
2. List the various methods of soil exploi	ration techniques	(2)
3. Explain the scope of soil investigation.		(3) (3)
. List the different types of samplers.		(3)
. Explain the method of Hammer drivin	•	(3)
. Explain the method of vibration drivin	g and jetting. OR	(3)
Explain the effects of Effects of pile dr		(3)
	Group-C	
(Long Answer Type Questions)		5 x 6=30
	·	2 X 0-30
Describe the Remedial measures aga	inst harmful settlements.	(5)
		. ,

8. Describe the different types of piles according to Material of construction.	(5)
9. Explain the methods for estimating the load –carrying capacity of a single pile.	
10. Explain dynamic cone penetration test.	(5)
11 Explain the Procedure for designing the D.C.C	(5)
11. Explain the Procedure for designing the R.C.C. strip footings.	
12. Justify the Procedure for proportioning and designing of the Trapezoidal combined footings.	(5)
OR OR	
Justify the Procedure for proportioning and designing of the strap footings.	(5)

•