Shri Shankaracharya Institute of Professional Management &Technology, Raipur
Department of Civil Engineering
SSIPMT **Class Test – I Session: APR-MAY 2023 Month – March**
Subject –STRUCTURAL ENGG. DESIGN-IVCode – D020811(020)
Semester – 8th
Time Allowed: 2 hrs.   Max Marks: 40
Note: -Part A is Compulsory. Attempt any one question from part B & C.

Q. No.	Questions	Marks	Levels of Bloom's taxonomy	CO's
	Unit I			
A.	Write the design procedure for Raft Foundation	[4]	Understand	CO1
B.	Design a strap footing for two columns A and B, spaced 5 meters center to center. Column A 300 mm x 300 mm in size carries a load of 600kN and is spaced at 0.6 meter from the property line. Column B, 400 mm x 400 mm in size, carries a load of 900 kN. The bearing capacity of soil is 120 kN/m2. Use M20 mix and Fe415 steel.	[16]	Apply	CO1
C.	A two-span continuous beam ABC, 10m long, freely supported at A and C and continuous over central support B, 5m from A, carries a characteristic dead load of 12 kN/m and characteristic live load of 18 kN/m. Plot the maximum elastic moment diagram before redistribution of moments and design moments envelope as per IS Code recommendations, using partial safety of 1.5 on loads.	[16]	Analyze	CO1
	Unit II			
A.	What are the different types of retaining walls?	[4]	Understand	CO2
B.	Design a counterfort retaining wall to retain earth embankment 7 m high above ground level. The foundation is to be taken 1 m deep where the safe bearing capacity of the soil may be taken as 180 KN/m2. The unit weight of earth is 18 KN/m3 and its angle of repose is 30". The embankment is horizontal at its top. The coefficient of friction between soil and concrete as 0.5, Use M20 concrete and Fe415 steel bars.	[16]	Analyze	CO2
C.	Design a T-shaped cantilever retaining wall for retaining 5 m high above ground level. Consider weight of soil =15KN/m^3, angle of repose =30 degree, coefficient of friction 0.5. Bearing pressure 150 KN/m2. Grade M20 and Fe415.	[16]	Analyze	CO2

Shri Shankaracharya Institute of Professional Management &Technology, Raipur
Department of Civil Engineering
Class Test – I Session: April-May 2023 Month – March
Semester – 8ᵗʰSubject – Construction ManagementSub.Code –D020822(20)
Time Allowed: **2 hrs.**   Max Marks: **40**
Note: - In Part I & II, Question A is compulsory and attempt any two from B, C & D.

Q. No.		Questions	Marks	Levels of Bloom's taxonomy	CO's
		Part I			
A.		Write short notes on following: (a) Define project (2) (b) 'Lean Construction' approach in construction industry(2)	[4]	Understand	CO1
B.		Explain project life cycle in detail.	[8]	Understand	CO1
C.		Write the role and functions of a project manager in construction.	[8]	Understand	CO1
D.		Explain major types of construction.	[8]	Understand	CO1
		Part II			
A.		Explain turnkey operation.	[4]	Understand	CO2
B.		Write short notes on: (a) Explain the term 'Bid Shopping' (b) Define project management	[8]	Understand	CO2
C.		Write the different trends of modern management?	[8]	Understand	CO2
D.		Discuss on effects of project risk on organization	[8]	Understand	CO2

Shri Shankaracharya Institute of Professional Management & Technology
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Class Test – ISession: April-May 2023Month – March
Semester – 8th Subject – Air Pollution & Control Measures
Code – D000814(020)
Time Allowed: 2 hrs.   Max Marks: 40

Note: - In Part I & II, Question A is compulsory and attempt any two from B, C & D.

Q. No.	Questions	Marks	Levels of Bloom's taxonomy	CO's
Part I				
A.	Define air pollution. Write the classification of it.	[4]	Understand	CO1
B.	Define stack gases. What are the major component present in it? Explain the sampling techniques for measurement of stack gases.	[8]	Understand	CO1
C.	What are the major sources of air pollutants discuss with it with suitable example.	[8]	Understand	CO1
D.	Write short note on: PAN, Aerosols, Photochemical smog, SPM	[8]	Understand	CO1
Part II				
A.	What are the meteorological parameters that influence air pollution?	[4]	Understand	CO2
B.	Explain the classification of plume behavior with well labelled figures.	[8]	Understand	CO2
C.	Explain in brief Gaussian plume model with assumptions and limitations.	[8]	Understand	CO2
D.	Write short note on: Wind Rose, Wind Profile	[8]	Understand	CO2