PRN:		Course Code :	U01ES003

First Year **B. Tech** End Semester Examination Winter 2024 000078

BASIC CIVIL & MECHANICAL ENGINEERING

Day and Date: Fri 6 DEC 2024 Max Marks: **50**

Time : 10:30AM To 12:30PM Duration: **02** hrs

Instructions:
1. All questions are compulsory.
2. Assume suitable data wherever necessary and mention it clearly.

			Marks	Bloom's Level	CO
Q.1		**Attempt any TWO following Question.**			
	a)	Enlist and discuss the scope of various sub- branches of civil engineering. (Any two)	05	2	1
	b)	What is bearing of a line? Explain the types of bearing.	05	2	1
	c)	Name the various types of Loads. How these are accounted in design of Building?	05	2	1
Q.2		**Attempt the following Question.**			
	a)	Draw neat sketch of components of building structure. Explain components of substructure.	10	2	1
		OR			
	b)	Outline following types of foundation with neat sketches. i) Stepped wall Footing ii) Isolated Footing iii) Combined Footing iv) Continuous Footing v) Cantilever Footing	10	3	2
Q.3		**Attempt the following Question.**			
	a)	Enlist various Building bye Laws. Explain any five with sketches.	10	3	3
		OR			
	b)	Rule out a page of level book to enter following readings. The RL of first point was 101.910 m. Calculate RLs by HI method. Apply usual checks. 1.880, 2.670, 3.750, 0.780, 2.170, 2.250, 3.975, 1.410, 1.580, 2.525	10	2	3
Q.4		**Attempt the following Question.**			
	a)	Explain with neat sketch Wind Power Plant.	10	2	4
		OR			
	b)	Explain with neat sketch Tidal Power Plant.	10	3	4
Q.5		**Attempt the following Question.**			
	a)	Define Manufacturing process and its types. Explain any one Metal Forming Process.	10	3	5
		OR			
	b)	Write a note on Automation and Robotics with suitable example.	10	3	5

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