Total No. of Questions – [3]

Total No. of Printed Pages: 02

G.R. No.	

PAPER CODE	U321-222B (ESE)

May 2022 (ENDSEM) EXAM

T.Y.B. TECH. (SEMESTER - II) - CIVIL

COURSE NAME: INFRASTRUCTURE ENGINEERING

COURSE CODE: CVUA32182B

(PATTERN 2018)

Time: [1Hr] [Max. Marks: 30]

(*) Instructions to candidates:

1) **Figures to the right indicate full marks.**
2) **Use of scientific calculator is allowed**
3) **Use suitable data where ever required**

Q.1 a) Write short note on vertical wall breakwater with neat sketch. [4]

b) Discuss the classification of Harbors based upon location and Purpose. [6]

OR

b) Discuss site selection criteria for Harbour in detail. [6]

Q2 a) Write a short note on Wind rose diagram with sketch [4]

b) Discuss the Zoning requirements regarding permissible heights of constructions and landing within the airport boundary. [6]

OR

b) The Longitudinal Section of the Runway Provides the Following Data: [6]

End To End of Runway (m)	Gradient (%)
0 to 200	+1.5
200 to 600	-1
600 to 1200	+0.8
1200 to 1600	+0.2

Calculate The Effective Gradient of The Runway and show ground profile with line diagram.

Q.3 a) Write brief note on bearings and mention its types. [4]

b) Discuss the factors affecting site selection for construction of bridge in detail. [6]

OR

b) The following are the costs of one pier and one super-structure span of multiple span bridge for various span lengths. The cost of superstructure span excludes the costs of railings, and flooring system. Calculate the economic span: [6]

Span in meter	4	8	12	15
Superstructure Cost	1700	7000	16000	24500
Sub Structure Cost	22200	23200	23000	23600