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**ANNA UNIVERSITY (UNIVERSITY DEPARTMENTS)****B.E. (Full Time) - END SEMESTER EXAMINATIONS, APR / MAY 2024**B.E. Electrical and Electronics Engineering  
II Semester**BE 3151 BASIC CIVIL ENGINEERING**

(Regulation 2023)

Time: 3hrs

Max. Marks: 100

CO1	Identify the civil engineering materials for construction
CO2	Gain knowledge on construction of buildings
CO3	Acquire basic knowledge on various types of surveying
CO4	Get familiarized with the importance of water supply and sanitary engineering
CO5	Gain awareness on various natural disasters and their mitigation

**BL – Bloom's Taxonomy Levels**

(L1-Remembering, L2-Understanding, L3-Appling, L4-Analysing, L5-Evaluating, L6-Creating)

**PART- A (10x2=20Marks)**

(Answer all Questions)

Q. No.	Questions	Marks	CO	BL
1	How are building stones classified based on their chemical composition?	2	1	1
2	Mention some of the properties of a good timber.	2	1	2
3	What are the requirements that a load-bearing wall should satisfy?	2	2	2
4	What are the sources of dampness in buildings?	2	2	2
5	Name some of the instruments used in levelling?	2	3	1
6	Classify surveying based on the equipment used.	2	3	2
7	Give the domestic water demand in India according to IS 1172, with its components.	2	4	2
8	Differentiate between conservancy and water carriage methods of sewage disposal.	2	4	2
9	Define a hazard and mention its broad categories.	2	5	1
10	What are the general characteristics of a cyclone?	2	5	2

**PART- B (5x 13=65Marks)**

Q. No.	Questions	Marks	CO	BL
11 (a)	Write a brief note on the properties of a good brick, its composition, and the manufacturing process.	13	1	3
<b>OR</b>				
11 (b)	Write short notes on a. ingredients of concrete and their functions b. properties of concrete c. factors affecting the workability of concrete d. water-cement ratio and its importance in concrete	13	1	3
12 (a)	What is meant by the bearing capacity of soil? Explain the different methods for improving the bearing capacity of soil. Also, brief on the various types of foundation with neat sketches.	13	2	4

<b>OR</b>				
12 (b)	What are the main functions and components of a floor? Briefly discuss the different types of commonly used floors and factors affecting the selection of a flooring?	13	2	4
13 (a)	What is a theodolite, and explain the classification and components of theodolite with a neat sketch? Also, write a note on the temporary and permanent adjustments made to theodolites.	13	3	3
<b>OR</b>				
13 (b)	Outline the fundamentals of remote sensing with the methods, applications, types, benefits, and drawbacks.	13	3	3
14 (a)	Enumerate the various physico-chemical characteristics of drinking water and explain the various steps involved in the treatment of water with a flowchart.	13	4	4
<b>OR</b>				
14 (b)	Discuss the conventional Activated Sludge Process (ASP) with neat sketches and also list out the various steps involved in the process of sewage treatment and disposal with the help of a flow diagram.	13	4	4
15 (a)	Discuss the vulnerability of India to flood and cyclone-related hazards. Give examples, including the salient features of major disasters caused by various cyclones in different parts of India during the past decade.	13	5	4
<b>OR</b>				
15 (b)	Elucidate the various steps involved in any disaster management process. Explain how hazard zonation mapping will help disaster mitigation in the case of earthquakes.	13	5	4

**PART- C (1x 15=15Marks)**

(Q.No.16 is compulsory)

Q. No.	Questions	Marks	CO	BL
16.	i. Enumerate the different types of cement with their uses in construction.	8	1	5
	ii. Describe the various causes and effects of forest fires and mention the strategies adopted for fire management.	7	5	6

