

**GUJARAT TECHNOLOGICAL UNIVERSITY**

**BID- SEMESTER-I EXAMINATION – WINTER 2024**

**Subject Code:2X15103**

**Date:24-12-2024**

**Subject Name: Basic Structures-I**

**Time:10:30 AM TO 12:30 PM**

**Total Marks:50**

**Instructions:**

1. Attempt any five questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Simple and non-programmable scientific calculators are allowed.

		<b>Marks</b>
<b>Q.1</b>	(a) Explain in detail various types of loads acting on structures.	<b>10</b>
<b>Q.2</b>	(a) Draw vertical wall section of building and indicates the various building elements.	<b>10</b>
<b>Q.3</b>	(a) Explain the structural properties of following building material: 1. Timber 2. Masonry 3. Concrete 4. Steel	<b>10</b>
<b>Q.4</b>	(a) Explain in detail with neat sketch the state of Equilibrium.	<b>10</b>
<b>Q.5</b>	(a) Explain in detail the frame structure with neat sketches.	<b>10</b>
<b>Q.6</b>	(a) Name any four structural elements of building and explain their behavior with neat sketches.	<b>10</b>
<b>Q.7</b>	(a) Define the term Structures and briefly explain any two man-made structure inspired from natural structure.	<b>10</b>

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