

GOVERNMENT POLYTECHNIC, VAISHALI

CIVIL ENGINEERING, SEMESTER - IV

LECTURE PLAN FOR LEFT SYLLABUS EFFECTIVE FROM 10-04-20

SUBJECT: → MECHANICS OF STRUCTURES (1615402)

SUBJECT TEACHER - AKASH KUMAR

S.NO.	UNIT	TOPIC TO BE COVERED	NO. OF PERIOD	BOOK
1.	Unit 5	<p><u>Stresses in Beams:</u></p> <p>5.1 Bending stresses in Beams: Concept of pure bending, theory of simple bending, assumptions in theory of bending, neutral axis, bending stresses and their nature, bending stress distribution diagram, moment of resistance.</p> <p>5.2 Application of theory of bending to symmetrical and unsymmetrical sections.</p> <p>5.3 Shear stresses in Beams: Shear stress equation, meaning of terms in equation, shear stress distribution for rectangular, hollow rectangular, circular sections and hollow circular sections.</p> <p>5.4 Relation b/w max^m shear stress and average shear stress</p>	<p>4</p> <p>L1</p> <p>L2</p> <p>L3</p> <p>L4</p> <p>L5</p> <p>L6</p>	<p>B1</p> <p>B1</p> <p>B1</p> <p>B1</p> <p>B1</p> <p>B1</p>
2.	Unit 6	<p><u>Analysis of Trusses</u></p> <p>6.1. Definition frames, classification of frames, perfect, imperfect, redundant and deficient frame.</p> <p>Relation b/w members and joints, assumption in analysis.</p> <p>Method of joint, method of sections and graphical method to find nature of forces.</p>	<p>L7,</p> <p>L8, L9</p> <p>L10, L11</p> <p>L12</p>	<p>B1</p> <p>B1 & B1</p> <p>B1, B1</p> <p>B1</p>

Books

(1) B1 → strength of Materials by R.S Khosmi
(S. Chand & Company Delhi)