

Shantilal Shah Engineering College, Bhavnagar
Applied Mechanics Department

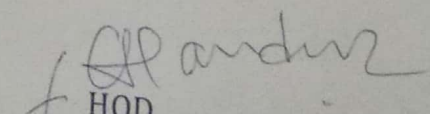
Date: 27/11/2018

PDDC - 1st Semester (Civil Engineering)

Scheduled and Syllabus of PAT/MST for 1st semester students of PDDC.

Subject Code	Name of Subject	Date & Time of Examination
2910601	Mechanics of Solids	Date: 05/12/2018, Time: 06.30 To 07:30

Chapter No.	Syllabus
1	Introduction Definition of space, time, particle, rigid body, deformable body. Force, types of forces, Characteristics of a force, System of forces, Composition and resolution of forces. Fundamental Principles of mechanics: Principle of transmissibility, Principle of superposition, Law of gravitation, Law of parallelogram of forces, Newton's Laws of Motion
2	Fundamentals of Statics Coplanar concurrent and non-concurrent force system: Resultant, Equilibrant, Free body diagrams. Coplanar concurrent forces: Resultant of coplanar concurrent force system by analytical and graphical method, Law of triangle of forces, Law of polygon of forces, Equilibrium conditions for coplanar concurrent forces, Lami's theorem. Application of these principles.
3	Applications of fundamentals of statics Statically determinate beams: Types of loads, Types of supports, Types of beams; Determination of support reactions, Relationship between loading, shear force & bending moment, Bending moment and shear force diagrams for beams subjected to only concentrated loads
4	Centroid and moment of inertia and mass moment of inertia Centroid: Centroid of lines, plane areas and volumes, Examples related to centroid of composite geometry, Pappus - Guldinus first and second theorems.


 HOD
 Applied Mechanics
 Shantilal Shah Engineering College,
 Bhavnagar