

GANPAT UNIVERSITY									
FACULTY OF ENGINEERING & TECHNOLOGY									
Programme		Bachelor of Technology			Branch/Spec.		CIVIL Engineering		
Semester		V			Version		2.0.0.0		
Effective from Academic Year			2019-20		Effective for the batch Admitted in			2014-2015	
Subject code		2CI 501		Subject Name		STRUCTURAL ANALYSIS – II			
Teaching scheme					Examination scheme (Marks)				
(Per week)	Lecture(DT)		Practical(Lab.)		Total		CE	SEE	Total
	L	TU	P	TW					
Credit	3		1		4	Theory	40	60	100
Hours	3		2		5	Practical	35	15	50
Pre-requisites:									
STRUCTURAL ANALYSIS – I									
Learning Outcome:									
After completion of this subject students are able to understand the behaviour like displacement and deformation of structural member under various loading. Students can get knowledge of behaviour of structural member under moving load on it. They also get knowledge of curved structure.									
Theory syllabus									
Unit	Content								Hrs
1	Displacement Methods: Analysis of continuous beams & plane frames for various loading including settlement/ rotation of support by slope deflection method, Moment distribution method including sway, use of symmetry of structure up to two storeyed / two bay frames.								8
2	Indeterminate Structures (All types) Static, kinetics and kinematics indeterminacy.								4
3	Matrix Methods: Analysis of indeterminate plane trusses, beams and frames by matrix flexibility and stiffness methods using system approach. Application of computer for analysis of various structures								8
4	Curved Structures: Domes-spherical & conical, longitudinal and hoop stresses.								4
5	Kani's Method : Concept of method application to continuous beams & frames with sway.								6
6	Prestressed Concrete : Introduction , properties of high strength materials, methods of prestressing, pre tensioning & post tensioning, losses in Prestressed concrete, analysis of section for flexure.								6
Practical content									
Practical and Term work shall be based on the above mentioned course content.									

Text Books	
1	Junarkar S.B. ; Mechanics of Structures Vol. II ,Charotar Publication
2	Vazirani & Ratwani ; Analysis of Structures Vol. II, Published By Khanna Publication ,1978
3	B.C. Punmia; Strength of Materials & Theory of Structures Vol. II , NemChand Publication,1984
Reference Books	
1	Wang C. K.; Intermediate Structural Analysis, Tata-McGraw Publicaton,1983.
2	Reddy C.S.; Basic Structural Analysis ,Tata- McGraw Publicaton,1981,1986
3	Gere & Weaver ; Matrix Analysis of Framed Structures, Van Nostrand Reinhold,1990
4	Wilbur J.B. and Norris C.R. : Elementary Structural Analysis, , McGraw Publicaton
5	Krishna Raju ; Prestressed Concrete ,Tata- McGraw Publicaton,1995
6	IS 1343 - Indian Standard code of Practice for Prestressed Concrete