SUBJECT- EST-1	GANDHI INSTITUTE OF ADVANCE COMPUTER & RESEARCH	3 RD SEM	FACULTY NAME – DIPTI BIBHAR
MODULE	TOPICS TO BE COVERED	NO OF PERIODS REQUIRED	TENTATIVE DATE FOR COMPLETION
1	Introduction	1	
1.1	Types of estimates – Plinth area, floor area / carpet area	2	
1.2	Units and modes of measurements as per IS 1200	2	
1.3	Accuracy of measurement for different item of work	3	
2	Quantity Estimate of Building	2	
2.1	Short wall long wall method and centre line method,	2	part of the second
	deductions in masonry, plastering, white washing, painting etc	3	
	multiplying factor (paint coefficients) for painting of doors and windows (paneled/glazed), grills etc.	3	
2.2	Detailed estimate of single storied flat roof building with shallow foundation and RCC roof slab with leak proof treatment over it including staircase and mumty room	10	
3	Analysis of Rates and Valuation	1	
3.1	Analysis of rates for cement concrete	2	
	brick masonry in Cement Mortar, laterite stone masonry in Cement Mortar	2	
	cement plaster, white washing, Artificial Stone flooring, Tile flooring, concrete flooring,	3	
	R.C.C. with centering and shuttering,	2	
	reinforcing steel, Painting of doors and windows etc. as per OPWD	3	
3.2	Calculation of lead, lift, conveyance charges, royalty of materials, etc. as per Orissa P.W.D. system (Concept of C.P.W.D./Railways provisions)	5	1
3.3	Abstract of cost of estimate	2	Mark Inthese of the
3.4	Valuation- Value and cost, scrap value, salvage value,	2	
	assessed value, sinking fund, depreciation and obsolesce, methods of valuation	3	
4	Administrative Set-Up of Engineering Organisations:	2	
4.1	Administrative set-up and hierarchy of Engineering department in State Govt./Central Govt./PSUs/Private Sectors etc.	3	
	Duties and responsibilities of Engineers at different positions /levels.	3	

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sМ	GANDHI INSTITUTE OF ADVANCE COMPUTER & RESEARCH	3 RD SEM	BIBHAR
ULE NO	TOPICS TO BE COVERED	NO OF PERIODS REQUIRED	COMPLETIO
1	Review Of Basic Concepts	3	
1.1	Basic Principle of Mechanics: Force, Moment, support conditions, Conditions of		
	equilibrium, C.G & MI, Free body dlagram	101	100.46
1.2	Review of CG and MI of different sections	1	
2	Simple And Complex Stress, Strain	15	The second second
2.1	Simple Stresses and Strains Introduction to stresses and strains: Mechanical properties of materials – Rigidity, Elasticity, Plasticity, Compressibility, Hardness, Toughness, Stiffness, Brittleness, Ductility, Malleability, Creep, Fatigue, Tenacity, Durability, Types of stresses -Tensile, Compressive and Shear stresses, Types of strains - Tensile, Compressive and Shear strains, Complimentary shear stress - Diagonal tensile / compressive Stresses due to shear, Elongation and Contraction, Longitudinal and Lateral strains, Poisson's Ratio, Volumetric strain, computation of stress, strain, Poisson's ratio, change in dimensions and volume etc, Hooke's law - Elastic Constants, Derivation of relationship between the elastic	2	
2.2	constants. Application of simple stress and strain in engineering field: Behaviour of ductile and brittle materials under direct loads, Stress Strain curve of a ductile material, Limit of proportionality, Elastic limit, Yield stress, Ultimate stress, Breaking stress, Percentage elongation, Percentage reduction in area, Significance of percentage elongation and reduction in area of cross section, Deformation of prismatic bars due to uniaxial load, Deformation of prismatic bars due to its self weight.	8	
2.3	Principal stresses and strains: Occurrence of normal and tangential stresses, Concept of Principal stress and Principal Planes, major and minor principal stresses and their orientations, Mohr's Circle and its application to solve problems of complex stresses	4	
3	Stresses in Beams and Shafts	10011 140	CAPPEND AND AND AND AND AND AND AND AND AND A
3.1	Stresses in beams due to bending: Bending stress in beams – Theory of simple bending – Assumptions – Moment of resistance – Equation for Flexure – Flexural stress distribution – Curvature of beam – Position of N.A. and Centroidal Axis – Flexural rigidity – Significance of Section modulus	4	
3.2	Shear stresses in beams: Shear stress distribution in beams of rectangular, circular and	2	
3.3	Stresses in shafts due to torsion: Concept of torsion, basic assumptions of pure torsion, torsion of solid and hollow circular sections, polar moment of inertia, torsional shearing stresses, angle of twist, torsional rigidity, equation of torsion	6	
3.4	Combined bending and direct stresses: Combination of stresses, Combined direct and bending stresses, Maximum and Minimum stresses in Sections, Conditions for no tension, Limit of eccentricity, Middle third/fourth rule, Core or Kern for square, rectangular and circular sections, chimneys, dams and retaining walls	5	
4	Columns and Struts (***) b. beneat Action 1960 F. Burgist I.	\$ 1 46 h	in the graph of the Book of the The control of the Physics
4.1	Columns and Struts, Definition, Short and Long columns, End conditions, Equivalent length / Effective length, Slenderness ratio, Axially loaded short and long column, Euler's theory of long columns, Critical load for Columns with different end conditions	3	
5	Sheet Force and Bending Moment	1 1 2 2	STATISTICS AND
5.2	Types of loads and beams: Types of Loads: Concentrated (or) Point load, Uniformly Distributed load (UDL), Types of Supports: Simple support, Roller support, Hinged support, Fixed support, Types of Reactions: Vertical reaction, Horizontal reaction, Moment reaction, Types of Beams based on support conditions: Calculation of support reactions using equations of static equilibrium.	8	
5.3	Shear force and bending moment in beams: Shear Force and Bending Moment: Signs Convention for S.F. and B.M, S.F and B.M of general cases of determinate beams with concentrated loads and udl only, S.F and B.M diagrams for Cantilevers, Simply supported beams and Over hanging beams, Position of maximum BM, Point of contra flexure, Relation between intensity of load, S.F and B.M.	10	
12 6 7 × 1	Slope and Deflection	2.7	To your dates
6.1	Introduction: Shape and nature of elastic curve (deflection curve); Relationship between slope, deflection and curvature (No derivation), Importance of slope and deflection.	1971 4 4/10	
6.2	Slope and deflection of cantilever and simply supported beams under concentrated and uniformly distributed load (by Double Integration method, Macaulay's method).	2	
7	Indeterminate Beams	3	See by More the
7.1	Indeterminate beams, Principle of consistent deformation/compatibility, Analysis of propped cantilever, fixed and two span continuous beams by principle of superposition, SF and BM diagrams (point load and udl covering full span)		
8	Trucces	Sept. 1 1 14	Contract Contract
8.1	Introduction: Types of trusses, statically determinate and indeterminate trusses, degree of indeterminacy, stable and unstable trusses, advantages of trusses	2	
8.2	Analysis of trusses: Analytical method (Method of Joints, method of Section)		addy a fall many and all all the

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, r-EVS	GANDHI INSTITUTE OF ADVANCE COMPUTER & RESEARCH TOPICS TO BE COVERED	3 ^{NS} SEM NO OF	FACULTY NAME- V .PAWNI
JULE NO	TOPICS (O BE COVERED	PERIODS REQUIRED	TENTATIVE DATE FOR COMPLETION
1 1 1	The Multidisciplinary nature of environmental studies	1	
1.1	Definition, scope and importance, Need for public awareness.	1	
2	Natural Resources	1	territoria protestar con efectivo con estableca con estableca con estableca de la constancia con estableca de la constancia della constancia de la constancia del constancia de la constancia de la constancia del constancia de la constancia del c
and the	Renewable and non renewable resources:		
	Natural resources and associated problems.	4	
1 X 2 2 1	Forest resources: Use and over-exploitation, deforestation, case	1. 1.4	
- H 1874	studies, Timber extraction mining, dams and their effects on forests		
	and tribal people.		
	Water resources: Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dam's benefits and	3	
	problems		
2.1	Mineral Resources: Use and exploitation, environmental effects of	1 1 1	
	extracting and using mineral resources.		
2.2	Food Resources: World food problems, changes caused by	Contribution (Ex	
	agriculture and over grazing, effects of modern agriculture,		
	fertilizers- pesticides problems, water logging, salinity,	The second	
2.3	Energy Resources: Growing energy need, renewable and	2	
	nonrenewable energy sources, use of alternate energy sources, case		
	studies.		
2.4	Land Resources: Land as a resource, land degradation, man induces landslides, soil erosion, and desertification	5,	
	b) Role of individual in conservation of natural resources.		
17.83	c) Equitable use of resources for sustainable life styles.	2017年1月1日	
3	Systems - System	75761,400	The state of the s
3.1	Concept of an eco system. Structure and function of an eco system.	18 40.4	PROSESSES RESIDENCE AND
	Producers, consumers ,decomposers.		
	Energy flow in the eco systems.		
	Ecological succession.		
	Food chains, food webs and ecological pyramids.	WANTED THE	
3.2	Introduction, types, characteristic features, structure and function	1 13	Strain Market de
	of the following eco system: Forest ecosystem: • Aquatic eco	TANK TO THE	
West to August Augus	systems (ponds, streams, lakes ,rivers, oceans, estuaries). Biodiversity and it's Conservation-Introduction-Definition:	1 1 1 1	Landa State Committee Comm
4	genetics, species and ecosystem diversity. Biogeographically		
	classification of India.	All of the state of	
4.1	Value of biodiversity: consumptive use, productive use, social	1	A PARTHAGO SE ANTE ANTRE
	ethical, aesthetic and optinvalues	HOW WAS CARE	
4.2	Biodiversity at global, national and local level. Threats to	10,00	计划发展的 "全国现在公司 "
	biodiversity: Habitats loss, poaching of wild life, man		
	• wildlife conflicts.	2.45.17.05.15.15	
5	Environmental Pollution-Definition Causes, effects and control measures of:	1	
5.1	a) Air pollution. b) Water pollution. c) Soil pollution d) Marine	2	Company of the contract of the
3.1	pollution e) Noise pollution. f) Thermal pollution g) Nuclear hazards		
5.2	Solid waste Management: Causes, effects and control measures of	3	e Warden Andhan en vo
4	urban and industrial wastes. Role of an Individual in prevention of	The Author	
	pollution. Disaster management: Floods, earth quake, cyclone and		
O. St. Childy	landslides.	100 MAR - 1000	
6	Social issues and the Environment-Form unsustainable to	4	
100	sustainable development. Urban problems related to energy. Water conservation, rain water harvesting, water shed		
	management.		
6.1	Resettlement and rehabilitation of people; its problems and	5 %	A NEW YORK TO BE SEEN AS
Miller	concern. Environmental ethics: issue and possible solutions.		
Charles.	Climate change, global warming ,acid rain , ozone layer depletion ,	1 Transfer	
	nuclear accidents and holocaust, case studies.		A STREET WEEK STREET
6.2	Air (prevention and control of pollution) Act. Water (prevention and	1 12 2 2 1	Winds Winds
	control of pollution) Act. Public awareness.		A THE WAY IN THE PARTY OF THE P
7	Human population and the environment	1 14 14 14 2 14 V	
7.1	Population growth and variation among nations. Population	4	
7.2	explosion-family welfare program. Human rights. Value education	The state of the s	
7.3	Role of information technology in environment and human health.		
6 2 / 13	I was a minimized recognicion to the continuous succession of the continuous section of the cont	3	THE RESIDENCE OF STREET

GTE LE NO	GANDHI INSTITUTE OF ADVANCE COMPUTER & RESEARCH TOPICS TO BE COVERED	NO OF PERIODS REQUIRED	FACULTY NAME – SIBANI JEN TENTATIVE DATE FOR COMPLETION
in testing to	J. Alam	1	
1	Introduction	1 1 1	DEVELOPMENT STORY
1.1	Soil and Soil Engineering	1	
1.2	Scope of Soil Mechanics	1/2	TRINGING OF BELLIA STORE
1.3	Origin and formation of soil	1	CONTRACTOR OF THE SECOND
2	Preliminary Definitions and Relationship	1	Printed and any other partitions of States
2.1	Soil as a three Phase system	10	
2.2	Water Content, Density, Specific gravity, Voids ratio, Porosity, Percentage of air voids, air content, degree of saturation, density Index, Bulk/Saturated/dry/submerged density, Interrelationship of various soil parameters		
3	Index Properties of Soil	1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
3.1	Water Content	1.1.1	
3.2	Specific Gravity	1 1 1	TATALAN AND AND AND AND AND AND AND AND AND A
3.3	Particle size distribution: Sieve analysis, wet mechanical analysis, particle size distribution curve and its uses	2 , 11, 12, 11, 11, 11, 11, 11, 11, 11, 11	
3.4	Consistency of Soils, Atterberg's Limits, Plasticity Index,	1995 (1995) 1495 (1995)	i kuti sa
	Consistency Index, Liquidity Index Classification of Soil	100.1	
4	· · · · · · · · · · · · · · · · · · ·	10 10 10 10 10 10 10 10 10 10 10 10 10 1	
4.1	General I.S. Classification, Plasticity chart	1	
4.2	Permeability and Seepage	Christian Co	
5 5.1	Concept of Permeability, Darcy's Law, Co-efficient of	1	
4 X (F (a))	Permeability, Factors affecting Permeability	*) - 30 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	at the second of the wife of
5.2 5.3	Constant head permeability and falling head permeability Test	1	
5.4	Seepage pressure, effective stress, phenomenon of quick sand	(etjy 1	
6	Compaction and Consolidation	1.13.13.1	S WARRY IN THE STREET
6.1	Compaction: Compaction, Light and heavy compaction Test, Optimum Moisture1 Content of Soil, Maximum dry density, Zero air void line, Factors affecting Compaction, Field compaction methods and their suitability	5	
6.2	Consolidation: Consolidation, distinction between compaction and consolidation. Terzaghi's model analogy of compression/ springs showing the process of consolidation – field implications	3	
5m (2.7 cm)	Shear Strength	1	
7.1	Concept of shear strength, Mohr- Coulomb failure theory, Cohesion, Angle of internal friction, strength envelope for different type of soil, Measurement of shear strength; Direct shear test, triaxial shear test, unconfined compression test and vane-shear test	5	
8	Earth Pressure on Retaining Structures	1.00	AND SERVICE OF THE SE
8.1	Active earth pressure, Passive earth pressure, Earth pressure at rest.	1/ Ya	
8.2	Use of Rankine's formula for the following cases (cohesion- less soil only) (i) Backfill with no surcharge, (ii) backfill with uniform surcharge	2	ing.
9	Foundation Engineering	1	THE WALL BELL WAS A WAR
9.1	Functions of foundations, shallow and deep foundation; different type of shallow and deep foundations with sketches. Types of failure (General shear, Local shear & punching shear)	5	
9.2	Bearing capacity of soil, bearing capacity of soils using Terzaghi's formulae & IS Code formulae for strip, Circular and square footings, Effect water table on bearing capacity of soil	2	
9.3	Plate load test and standard penetration test	5 July 164 144 (b)	and the complete the best of the contract of t

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ULE NO	GANDHI INSTITUTE OF ADVANCE COMPUTER & RESEARCH TOPICS TO BE COVERED	3 RD SEM NO OF PERIODS	FACULTY NAME – SIBANI JENA TENTATIVE DATE FOR COMPLETI
1,2218	PART :A (BUILDING MATERIALS)	REQUIRED	and the recognition of the contract
1 *******	Stone	12/2/10/2015	state of the father than the
	Classification of rock, uses of stone, natural bed of stone,	4 9 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Market Market State Section
1.1		2 10 7	
1,2	Qualities of good building stone,	There are 1 West or	speciel in the Letters wheel as they
1.3	Dressing of stone	1 2 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
1.4	Characteristics of different types of stone and their uses	Cavava 1 Constitu	And There is a world with the com-
2	Bricks The Property of the Pro	1, 519 719 79 79	THE STATE OF THE PARTY AND THE PARTY.
2.1	Brick earth – its composition	0.1	relly to be one on the parkage of the charge
2,2	Brick making - Preparation of brick earth, Moulding, Drying, Burning	2 11 /2	secondary and the Taxanan about
A COLOR	in kilns (continuous Process)		
2.3	Classification of bricks, size of traditional and modular bricks,	Transfer of Albertain	to provide the record of the control of
	qualities of good building bricks	2	
1519 1875 Law		THE REPORT OF THE PARTY.	The State of the State of Stat
2V3	Cement, Mortar and Concrete	School 1 Section	ern ragin put parament a none. It
3.1	Cement: Types of cements, Properties of cements, Manufacturing of	2	
	cement		
3.2	Importance and application of blended cement with fly ash and	2	2000年的特別的特別的特別的特別的
	blast furnace slag.	ally talking all m	
3.3	Mortar: Definition and types of mortar	The State 1 Haraston	278 1 22 2 10 10 10 10 10 Ye le 1/2 10 10 10 10 10

3.4	Sources and classification of sand, Bulking of sand	- 1 1 1 grants	
3.5	Use of gravel, morrum and fly ash as different building materia	2 1 2	THE PROPERTY AND SOME WAS INCOME.
3.6	Concrete: Definition and composition- Water cement ratio-	2	SOLAR ENGINEER AROUS
1, 100	Workability, mechanical properties and grading of aggregates,		
Mariana	mixing, placing, compacting and curing of concrete	10 mg () 10 mg/s	1. 2. 度图图 发展 12. Parkits
1314 4 30 to 1	Other Construction Materials	13 med 1 + Can	(1995年) · · · · · · · · · · · · · · · · · · ·
4.1	Timber: Classification and Structure of timber	9 - 359 1 - 1 - 1 - 1	Girls College College Ve
4.2	Seasoning of timber – Importance.	A. J. (18. 1. 14.)	Marie City Artist
4.3	Characteristics of good timber	1	AND THE RESERVE OF THE PARTY OF
			10.0
4.4	Clay products and refractory materials – Definition and	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
Section 1857	Classification.		
4.5	Properties and uses of refractory materials- tiles, terracotta,	1,	
	porcelain glazing		
4.6	Iron and Steel: Uses of cast iron, wrought iron, mild steel and tor	35 a.1	
	stee		
5. 5	Surface Protective Materials	7 .131	to an the employed the third
5.1	Composition of Paints, enamels, varnishes	at 12% c1 17	A CONTRACTOR SERVICES
5.2	Types and uses of surface protective materials like Paints, Enamels,	2	and the second of the last of the second
	Varnishes, Distempers, Emulsion, French polish and Wax Polish		等于 25.1 (1.1) (1.1) (1.1) (1.1) (1.1) (1.1) (1.1) (1.1) (1.1) (1.1) (1.1) (1.1)
de rakinga	PART: B (CONSTRUCTIONS TECHNOLOGY)	CP food	I . The transfer of the control of t
1	Introduction	35 (4) (4)	
1.1	Buildings and classification of buildings based on occupancy	As (6.1 1 7)	The December of the Committee of the Com
1.2	Different components of a building.	Hallow (11)	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1.3	Site investigation – objectives, site reconnaissance and explorations	1	and the state of t
2	Foundations	111111111111111111111111111111111111111	Property of the medical section of the Control of t
2.1	Concept of foundation and its purpose	1 10 1 10 1 10 1 10 1 10 1 10 1 10 1 1	· 在於學、國際教育的機能。
2.2	Types of foundations – shallow and deep	Wash 1 (1999)	APPENDED TO SEEL MARKET BELLEVILLE
2.3	Shallow foundation-constructional details of : Spread foundations	1	Carry Character (MAN)
WAR SEL	for walls, thumb rules for depth and width of foundation and		
NAME OF	thickness of concrete block	医甲基代基 独立	A PERSONAL PROPERTY OF THE PRO
2.4	Deep foundations: Pile foundations-their suitability, classification of	\$ 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	HEALTH OF THE WARREN
Mary No.	piles based on materials, function and method of installation.	A TANK TO A TANK	
3 3	Walls & Masonry Works	11.20 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	in a trade of the
3.1	Purpose of walls	1, 44	a creating that the second and
3.2	Classification of walls – load bearing, non-load bearing walls,	1	Simple Spring Control of White
A COL	retaining walls.	1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1	
AMPRICA COMM	Classification of walls as per materials of construction: brick, stone,	Control of the second	The second secon
3.3	Classification of walls as per materials of construction: brick, stone,	1	
	reinforced brick, reinforced concrete, precast, hollow and solid	ANTONIA MARK	PARENCE SERVICE MENTERS OF THE SERVICE
September 1995	concrete block and composite masonry walls (Concept Only).	A CONTRACTOR OF THE CONTRACTOR	
3.4	Partition Walls: Suitability and uses of brick and wooden partition	1	DESIGNATION OF THE PARTY OF THE
THE RESERVE	walls	ASSESSMENT OF THE SECOND	eran kutan dan berkesi beringi
3.5	Brick masonry : Definition of different terms	1. 8. 1. 1. 1. 1. 1.	在特別在其中,這一个物理學是一個世界
3.6	Bond – meaning and necessity: English bond for 1 and 1-1/2 Brick	1 1 m	等。1985年1985年1987年1988年198日 林沙
CONTRACT.	thick walls. T, X and right angled corner junctions. Thickness for	DA STREET A STATE	
HANGER OF	1and 1-1/2 brick square pillars in English bond		
3.7	Stone Masonry:	1,000	KARNAN PRAKTIKA DI BERIO AMATEK
3.8	Glossary of terms –String course, corbel, cornice, block-in-course,	1, 1	The state of the s
	grouting, mouldings, templates, throating, through stones, parapet,		V Salaka Salah
	coping, pilaster and buttress		
4 112		The state of the s	The Company of the Market State of the Company of t
4.1		1	and the second second second second second
	Glossary of terms used in doors and windows	114.	· "人","这个人","不是我们,我们是我们的人。
4.2	Doors – different types of doors	12.4	了一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个

1	Windows - different types of windows	1 1	A Substitute of the Substitute
	Purpose of use of arches and lintels	15,55,100	Le like effektiven hattisken her
4.4	Floors, Roofs and Stairs	1-1-1-1 1 (d)	er autoper Hedelegen (1964)
5.1	Floors: Glossary of terms ,Types of floor finishes – cast-in-situ, concrete flooring(monolithic, bonded), terrazzo tile flooring, cast in situ Terrazzo flooring, timber flooring (Concept only)	1	
5.2	Roofs: Glossary of terms, Types of roofs, concept and function of flat, pitched, hipped and Sloped roofs	1	
5.3	Stairs: Glossary of terms; Stair case, winder, landing, stringer, newel, haluster, rise, tread, width of stair case, hand rail, nosing, head room, mumty room	1	
5.4	Various types of stair case – straight flight, dog legged, open well, quarter turn, half turn (newel and geometrical stairs), bifurcated stair, spiral stair, cantilever stair, tread riser stair.	1	
6	Protective, Decorative Finishes, Damp and Termite Proofing	拉克里1 700	2 1.28 2 1.21
6.1	Plastering – purpose – Types of plastering, Types of plaster finishes – Grit finish, rough cast, smooth cast, sand faced, pebble dash, acoustic plastering and plain plaster etc.	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
6.2	Proportion of mortars used for different plasters, preparation of mortars, techniques of plastering and curing	1	
6.3	Pointing - purpose -Types of pointing	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	27 AUGUS - 10 SESSION 19 11 VACA
6.4	Painting – objectives – method of painting new and old wall surfaces, wood surface and metal surfaces – powder coating and spray painting on metal surfaces.	2	
6.5	White washing – Colour washing – Distempering – Internal and	1	
6.6	Damp and Termite proofing – Materials and Methods.		1 0 00 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
7	Green Buildings, Energy Management and Energy Audit Of Buildings & Project	1	
7.1	Concept of green building	1	3.1 - W. V. 3.75. (1951. Va. 1962.)
7.2	Introduction to Energy Management and Energy Audit of Buildings.	1	TO THE REPORT OF THE PARTY OF T
7.3	Aims of energy management of buildings	1	Level of the Market Salar Control
7.4	Types of energy audit, Response energy audit questionnaire	Sair 1 11 - 1	THE SECTION ASSESSMENT OF THE PROPERTY OF THE
7.5	Energy surveying and audit report.	10753 31 4 1777 8 5	and the his birth as

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SUBJECT- STRUCTURAL DESIGN -1	GANDHI INSTITUTE OF ADVANCE COMPUTER & RESEARCH	A SEM	FACULTY NAME - ATUL RANIAN
MODULE NO	TOPICS TO BE COVERED	NO OF PERIODS REQUIRED	TENTATIVE DATE FOR COMPLETION
1	Working stress method (WSM)		Total Commission (Commission Commission Comm
1.1	Objectives of design and detailing. State the different methods of design of concrete structures.	2	en er en de men untre er en
1.2	Introduction to reinforced concrete, R.C. exctions their behavior, grades of concrete and steel. Permissible stresses, assumption in W.S.M.	2.	 By more than the content of a content of the content
1.3	Flexural design and analysis of single reinforced sections from first avanciales	emenginin saram sin ay gira magaribosib misasan saram sara- anta- misasa di sajan njisa pisa pisa pisa.	a frica. Brain aga argain shann a babha a la da mai girir gunla giri da da da maran na mbhainn da madh na mhain ann masa ann
1.4	Concept of under reinforced, over reinforced and balanced sections		and the stage and a section of many him to easy him the single simple of the advantage of the stage of the section of the sect
1.5	Advantages and disadvantages of WSM, reasons for its obsolescence.		thronic the week through the telestral distinct calment highest demokratis for the distinct calment calment and advantage to the week the calment and the calment calm
2	Philosophy Of Limit State Method (LSM)	en andrees frances in each is an east of an initial an earth are suited and the analysis and an expension as a	
2.1	Definition, Advantages of LSM over WSM, IS code suggestions regarding design philosophy	esencia mai in marca in manda in comencia combina que in construente meno di sociali casió misso a seriam a seriam constituente de la companya de la company	n Berrinan sancanda landa ay makisa sanda sanda kali santan ay kila ah ha dhila con latin kina lishi da shabib A
2.2	Types of limit states, partial safety factors for materials strength, characteristic strength, characteristic load, design load, loading on structure as per 15, 875	in de militar selle selle se commence de commence de commence de commence se commence de c	
2.3	Study of 15 specification regarding spacing of reinforcement in slab, cover to reinforcement in slab, beam column & footing, minimum reinforcement in slab, beam & column, lapping, anchorage, effective span for beam & slab	3	
3	Analysis and Design of Single and Double Reinforced Sections (LSM)		
3.1	Limit state of collapse (flexure), Assumptions, Stress-Strain relationship for concrete and steel, neutral axis, stress block diagram and strain diagram for singly reinforced section.		
3.2	Concept of under - reinforced, over-reinforced and limiting section, neutral axis co-efficient, limiting value of moment of resistance and limiting percentage of steel required for limiting singly R.C. section	4	
3.3	Analysis and design: determination of design constants, moment of	1	
3.4	resistance and area of steel for rectangular sections Necessity of doubly reinforced section, design of doubly reinforced		
4	rectangular section	Sold in the trade in	
4.1	Shear, Bond and Development Length (LSM)	explain the fire and the production of the sea	Applied plant and Albert
	Nominal shear stress in R.C. section, design shear strength of concrete, maximum shear stress, design of shear reinforcement, minimum shear reinforcement, forms of shear reinforcement	2	
4.2	Bond and types of bond, bond stress, check for bond stress, development length in tension and compression, anchorage value for hooks 900 bend and 450 bend standards lapping of bars, check for development length	d project para (3 com a com en restrict project project O and by more a before a com-	
4.3	Numerical problems on deciding whether shear reinforcement is required or not, check for adequacy of the section in shear. Design of shear reinforcement; Minimum shear reinforcement in beams (Explain through examples only).	4	ing A
5	Analysis and Design of T-Beam (LSM)	an fund take the Children to	A MANAGEMENT OF STREET
5.1	General features, advantages, effective width of flange as per IS: 456- 2000 code provisions.	2	A CARLON CONTRACTOR
5.2	Analysis of singly reinforced T-Beam, strain diagram & stress diagram, depth of neutral axis, moment of resistance of T-beam section with neutral axis lying within the flange	t in the state of	
5.3	Simple numerical problems on deciding effective flange width. (Problems only on finding moment of resistance of T-beam section when N.A. lies within or up to the bottom of flange shall be asked in written examination)	4	
6	Analysis and Design of Slab and Stair case (LSM)		
6.1	Design of simply supported one-way slabs for flexure check for deflection control and shear	2.40	A CHIEF HE ME ALCOHOL
6.2	Design of one-way cantilever slabs and cantilevers chajjas for flexure check for deflection control and check for development length and	2	
6.3	shear. Design of two-way simply supported slabs for flexure with corner free to lift.	1	
6.4	Design of dog-legged staircase	1	1 200
6.5	Detailing of reinforcement in stairs spanning longitudinally	1	31,2
7	Design of Axially loaded columns and Footings (LSM)		- MARINE
7,1	Assumptions in limit state of collapse- compression	1	The state of the s
7.2	Definition and classification of columns, effective length of column. Specification for minimum reinforcement; cover, maximum reinforcement, number of bars in rectangular, square and circular sections, diameter and spacing of lateral ties.	4	
7.3	Analysis and design of arially loaded short square, rectangular and circular columns (with lateral ties only).	anner de notation anner de la completion de la completion de la completion de la contraction de la con	and the control of th
7.4	Types of footing. Design of buileted square column footing of uniform thickness for flexure and shear.	nt August various vann voord aspekter van de troop terrete van zoon have begreich de großen de großen van de p 1	

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	GANDHI INSTITUTE OF ADVANCE COMPUTER & RESEARCH	4 TH SEM	FACULTY NAME
	TOPICS TO BE COVERED	NO OF PERIODS REQUIRED	TENTATIVE DAT
1	TOPICS TO BE COVERED		FOR COMPLETIO
		1	
-	INTRODUCTION TO SURVEYING, LINEAR MEASUREMENTS:	1	
-		2	
-	Surveying: Definition, Aims and objectives Principles of survey-Plane surveying- Geodetic Surveying- Instrumental surveying. Principles of survey-Plane surveying- Geodetic Surveying- Instrumental surveying.	2	
-		2	!
3	Precision and accuracy of measurements, instruments associated and remedies Errors and mistakes in linear measurement — classification, Sources of errors and remedies Errors and mistakes in linear measurement — classification, pull, sag, numerical problem applying	2	
4	Errors and mistakes in linear measurement — classification, Sources of errors and remediate problem applying Corrections to measured lengths due to-incorrect length, temperature variation, pull, sag, numerical problem applying	4	
5	Corrections to measured lengths due to		
	corrections.	1	
- 1	CHAINING AND CHAIN SURVEYING:	1	
1	Equipment and accessories for chaining Equipment and accessories for chaining Equipment and accessories for chaining	3	1
2	Equipment and accessories for chaining Ranging – Purpose, signaling, direct and indirect ranging, Line ranger – features and use, error due to incorrect ranging. Methods of chaining – Chaining on flat ground, Chaining on sloping ground – stepping method, Clinometer-features and use,	2	
3	Methods of chaining -Chaining on flat ground, Chaining on sloping ground - stepping method, and the stepping method, and the stepping method is a stepping method.		
1	slope correction.	2	1
	slope correction. Setting perpendicular with chain & tape, Chaining across different types of obstacles –Numerical problems on chaining across		
	Section per per section of the secti	2	-
	obstacles Purpose of chain surveying, its Principles, concept of field book. Selection of survey stations, base line, tie lines, Check lines Purpose of chain surveying, its Principles, concept of field book. Selection of survey stations, base line, tie lines, Check lines	And the second name of the secon	-
5		2	
,	Offsets – Necessity, Perpendicular and Oblique offsets, instruments for setting onset. Errors in chain surveying – compensating and accumulative errors causes & remedies, Precautions to be taken during chain	2	
8	Errors in chain surveying - compensating and accumulative errors causes of contents		
	surveying.	1	
	ANGULAR MEASUREMENT AND COMPAS SURVEYING :	1	
1	Most greenent of angles with chain, tape & compass	1	
2		2	
	The series of apples concept of meridians - Magnetic, True, arbitrary; Concept of bearings - Whole circle bearing, Quadranter	4 6	
3			
	bearing, Reduced bearing, suitability of application, numerical problems of Fore bearing, Back Bearing, Numerical Use of compasses – setting in field-centering, leveling, taking readings, concepts of Fore bearing, Back Bearing, Numerical	2	7.7 1 2
4		1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	V
	problems on computation of interior & exterior angles from bearings	1 /	1 2 1 1 1
5	5 Effects of earth's magnetism – dip of needle, magnetic declination, variation in declination, numerical problems on application		100 E
	of correction for declination.	1	
6	Errors in angle measurement with compass – sources & remedies.	1	1
7	Second traverse Methods of traversing		-
\$	the state of the s	1	
	Errors in compass surveying – sources & remedies. Plotting of traverse – check of closing error in closed & open traverse,	1	
9			
	Bowditch's correction, Gales table	1	7 19
1	MAP READING CADASTRAL MAPS & NOMENCLATURE:	1	
1	Study of direction, Scale, Grid Reference and Grid Square Study of Signs and Symbols	1	
2	Cadastral Map Preparation Methodology	1	
3	Unique identification number of parcel		
	Positions of existing Control Points and its types	1	
4	Positions of existing Control Points and 18 types	1	274
S	Adjacent Boundaries and Features, Topology Creation and verification	1	
5	PLANE TABLE SURVEYING:	1	1
.1	Objectives, principles and use of plane table surveying.	1	
2	Instruments & accessories used in plane table surveying.	1.	
3	11) Radiation (2) Intersection, (3) Traversing, (4) Resection.		
A	Statements of TWO POINT and THREE POINT PROBLEM. Errors in plane table surveying and their corrections, precautions in		
	olane table surveying.	1.	-
	THEODOLITE SURVEYING AND TRAVERSING: 14-45 AMARIAN AND TRAVERSING:	1 . 2	13/24
6	THEODOLITE SURVEYING AND TRAVERSING.	1	()
1	Purpose and definition of theodolite surveying	2	100
2	Purpose and definition of theodolite surveying Transit theodolite- Description of features, component parts, Fundamental axes of a theodolite, concept of vernier, reading a	Harry Landon	THE STATE OF
	vernier Temporary adjustment of theodolite	2	the surface of
3 8 11	A firm Massurement of horizontal and vertical angles.	2 1 1000 vs	e si mangangan k
4	Measurement of magnetic bearings, deflection angle, direct angle, setting out angles, prolonging a straight line with theodolite,		Charles Was
		The first of the state of the s	1 2 2 2 2 2
and the same	Methods of theodolite traversing with – inclined angle method, deflection angle method, bearing method, Plotting the traverse	2	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1
5	the district of the letter of	일본 기계 기계 기계	AT AN AMERICA
\$1000	by coordinate method, Checks for open and closed traverse. Traverse computation – consecutive coordinates, latitude and departure, Gale's traverse table, Numerical problems on omitted	3	I THE WAY
6	Traverse computation – consecutive coordinates, leutide and departure, describing	THE RESERVE OF THE PARTY	W. W. S. L. S.
ET.	measurement of lengths & bearings	The Thirt I had the state	A A Service of
7 播种	Closing error – adjustment of angular errors, adjustment of bearings, numerical problems	1 1 de de	. The same
2	Closing error – adjustment of angular errors, adjustment of security of the second of traverse – Bowditch's method, transit method, graphical method, axis method, calculation of area of closed		T WELL S
WEET TO	traverse.	1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	
Total Si	THE CONTROLLER CONTROLLER CONTROLLER CONTROLLER CONTROLLER CONTROLLER CONTROL CONTROL CONTROL CONTROL CONTROL	7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2000 1146
7 ()	The string and burges and types of leveling—concepts of level surface, Horizontal surface, Vertical surface, datum, R. E., B.W.	1. 1 7 . 1 W	1 100 200 1000
.1	Instruments used for leveling, concepts of line of collimation, axis of bubble tube, axis of telescope, Vertical axis.	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	I KIN X CAM
.2	Instruments used for leveling, concepts of line of continuous, and of bounds and of bounds and bound of the second mark DS IC EC CD LII	1, 1	14 1 18 E M. P.
	Levelling staff – Temporary adjustments of level, taking reading with level, concept of bench mark, BS, IS, FS, CP, HI.	1/2/2/	
3	Field data entry - level Book - height of collimation method and Rise & Fall method, comparison, Numerical problems on	A MAY S	TO MINE
3 !A	reduction of levels applying both methods. Arithmetic checks.		16 3 4 4 4 1 1
	1 II and a section of correction	The state of the s	A 1970 TO AN
A	effects of curvature and refraction, numerical problems on application of correction.	a Software Field of the con-	A THE PLANT OF THE PARTY NAMED IN
A 1.5	Effects of curvature and refraction, numerical problems on application of correction. Engineeral leveling – principles, methods, numerical problems, precise leveling	1	S. All Control
A 1.5 1.6	Secretary leveling principles methods numerical problems, precise leveling	1 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	The state of the s
1.5 1.6	Reciprocal leveling – principles, methods, numerical problems, precise leveling Errors in leveling and precautions, Permanent and temporary adjustments of different types of levels.		
1.5 1.6	Reciprocal leveling – principles, methods, numerical problems, precise leveling Errors in leveling and precautions, Permanent and temporary adjustments of different types of levels. Professions, recreeks and characteristics of contours	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	21 12/24
7.5 7.6 7.7	Reciprocal leveling – principles, methods, numerical problems, precise leveling Errors in leveling and precautions, Permanent and temporary adjustments of different types of levels. Definitions, concepts and characteristics of contours Methods of contouring, plotting contour maps, Interpretation of contour maps, toposheets.	1 000000000000000000000000000000000000	1 45 (1) 4 (
7.5 7.6 7.7 7.8	Reciprocal leveling – principles, methods, numerical problems, precise leveling Errors in leveling and precautions, Permanent and temporary adjustments of different types of levels. Definitions, concepts and characteristics of contours Methods of contouring, plotting contour maps, Interpretation of contour maps, toposheets.	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
7.5 7.6 7.7	Reciprocal leveling – principles, methods, numerical problems, precise leveling Errors in leveling and precautions, Permanent and temporary adjustments of different types of levels. Definitions, concepts and characteristics of contours Methods of contouring, plotting contour maps, Interpretation of contour maps, toposheets.	1 000000000000000000000000000000000000	
7.5 7.6 7.7 7.8 7.9	Reciprocal leveling – principles, methods, numerical problems, precise leveling Errors in leveling and precautions, Permanent and temporary adjustments of different types of levels. Definitions, concepts and characteristics of contours Methods of contouring, plotting contour maps, Interpretation of contour maps, toposheets. Use of contour maps on civil engineering projects – drawing crosssections from contour maps, locating proposal routes of roads.	1 000000000000000000000000000000000000	
7.5 7.6 7.7 7.8	Reciprocal leveling – principles, methods, numerical problems, precise leveling Errors in leveling and precautions, Permanent and temporary adjustments of different types of levels. Definitions, concepts and characteristics of contours Methods of contouring, plotting contour maps, Interpretation of contour maps, toposheets. Use of contour maps on civil engineering projects – drawing crosssections from contour maps, locating proposal routes of roads / railway / canal on a contour map, computation of volume of earthwork from contour map for simple structure Meshes contains interpret Human and Economic Activities (i.e.: Settlement, Communication, Land use etc.), Interpret	1 1 1 3	
7.5 7.6 7.7 7.8 7.9	Reciprocal leveling – principles, methods, numerical problems, precise leveling Errors in leveling and precautions, Permanent and temporary adjustments of different types of levels. Definitions, concepts and characteristics of contours Methods of contouring, plotting contour maps, Interpretation of contour maps, toposheets. Use of contour maps on civil engineering projects – drawing crosssections from contour maps, locating proposal routes of roads / railway / canal on a contour map, computation of volume of earthwork from contour map for simple structure Map Interpretation: Interpret Human and Economic Activities (i.e.: Settlement, Communication, Land use etc.), Interpret Physical landform (i.e.: Relief, Drainage Pattern etc.), Problem Solving and Decision Making	1 1 1 3	i i i i i i i i i i i i i i i i i i i
A	Reciprocal leveling – principles, methods, numerical problems, precise leveling Errors in leveling and precautions, Permanent and temporary adjustments of different types of levels. Definitions, concepts and characteristics of contours Methods of contouring, plotting contour maps, Interpretation of contour maps, toposheets. Use of contour maps on civil engineering projects – drawing crosssections from contour maps, locating proposal routes of roads / railway / canal on a contour map, computation of volume of earthwork from contour map for simple structure Map Interpretation: Interpret Human and Economic Activities (i.e.: Settlement, Communication, Land use etc.), Interpret Physical landform (i.e.: Relief, Drainage Pattern etc.), Problem Solving and Decision Making COMPUTATION OF AREA & VOLUME:	1 1 1 1 3 3 3 3 3 1 1 1 1 1 1 1 1 1 1 1	AAS
A 5 6 7 7 8 8 1.9 110 111	Reciprocal leveling – principles, methods, numerical problems, precise leveling Errors in leveling and precautions, Permanent and temporary adjustments of different types of levels. Definitions, concepts and characteristics of contours Methods of contouring, plotting contour maps, Interpretation of contour maps, toposheets. Use of contour maps on civil engineering projects – drawing crosssections from contour maps, locating proposal routes of roads / railway / canal on a contour map, computation of volume of earthwork from contour map for simple structure Meshes contains interpret Human and Economic Activities (i.e.: Settlement, Communication, Land use etc.), Interpret	1 1 1 3	



SUBJECT- HIGHWAY ENGINEERING	GANDHI INSTITUTE OF ADVANCE COMPUTER & RESEARCH	yMsem	FACULTY NAME – HRUSHIKESH SETHI
MODULE NO	TOPICS TO BE COVERED	NO OF PERIODS REQUIRED	TENTATIVE DATE FOR COMPLETION
1 6462824	Introduction with the second s	Washington	TOPEN THE SET WITH THE PROPERTY
1.1	Importance of Highway transportation: importance organizations like Indian roads congress, Ministry of Surface Transport, Central Road Research Institute	2	
1.2	Functions of Indian Roads Congress	1001 9 (11 2000)	在中国工作工作的 医克里克斯氏试验检尿病 医二甲状态
1.3	IRC classification of roads	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	· 1000 日本市区的设施 1486年2月15日
1.4	Organisation of state highway department	sking by 1 happy Re-	en litter med tiglistable telegram with acc
2	Road Geometrics	10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
2.1	Glossary of terms used in geometric and their importance, right of way, formation width, road margin, road shoulder, carriage way, side slopes, kerbs, formation level, camber and gradient	5	
2.2	Design and average running speed, stopping and passing sight distance	1 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	which are the started and the process of the face of his
2.3	Necessity of curves, horizontal and vertical curves including transition curves and super elevation, Methods of providing super – elevation Road Materials	3	Hawking the mean for the
3.1		2	# 10 A S A S A S A S A S A S A S A S A S A
3.1	Difference types of road materials in use: soil, aggregates, and binders Function of soil as highway Subgrade	1. 1. 1	
3.3	California Bearing Ratio: methods of finding CBR valued in the laboratory	70 J 2	with the control of the control of the second
3.4	and at site and their significance Testing aggregates: Abrasion test, impact test, crushing strength test,	2	
	water absorption test & soundness test		
4 1	Road Pavements	1 30 1 1 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	Section of the property of the section of the secti
4.1	Road Pavement: Flexible and rigid pavement, their merits and demerits, typical cross-sections, functions of various components Flexible pavements:	4	
42	Sub-grade preparation: Setting out alignment of road, setting out bench marks, control pegs for embankment and cutting, borrow pits, making profile of embankment, construction of embankment, compaction, stabilization, preparation of subgrade, methods of checking camber, gradient and alignment as per recommendations of IRC, equipment used for subgrade preparation	5	
4.3	Sub base Course: Necessity of sub base, stabilized sub base, purpose of stabilization (no designs) Types of stabilization Mechanical stabilization• Lime stabilization• Cement stabilization• Fly ash stabilization•	5	
4.4	Base Course: Preparation of base course, Brick soling, stone soling and metalling, Water Bound Macadam and wet-mix Macadam, Bituminous constructions: Different types	5	
4.5	Surfacing: Surface dressing• (i) Premix carpet and (ii) Semi dense carpet Bituminous concrete• Grouting•	1	
4.6	Rigid Pavements: Concept of concrete roads as per IRC specifications	distributed to seemble.	1975年,1986年,1986年 - 1986年 - 19
5.1	Hill Roads: Introduction: Typical cross-sections showing all details of a typical hill	2	
563	road in cut, partly in cutting and partly in filling Breast Walls, Retaining walls, different types of bends	1	or progressor is the area interest operating section. CK are yet in the progress of Mantanette and our manifold
5.2	Road Drainage:	1.13 (1.13)	Property of Systems of the State of the Control of
6.1	Necessity of road drainage work, cross drainage works	# 14 4 4 5 2 1 4 5 5 1 4 4 5 1 1 1	Contract the second of the sec
6.2	Surface and sub-surface drains and storm water drains. Location, spacing and typical details of side drains, side ditches for surface drainage, intercepting drains, pipe drains in hill roads, details of drains in cutting embankment, typical cross sections.	7	
7	Road Maintenance:	10 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	attaggistre of 10 sets of general property (1200)
14 (190.7.1 b)	Common types of road failures – their causes and remedies	. Kas W. 21 p. 6. 6. 6. 6.	and the state of a suppose of the state of t
7.2	Maintenance of bituminous road such as patch work and resurfacing Maintenance of concrete roads – filling cracks, repairing joints, maintenance of shoulders (berm), maintenance of traffic control devices	3	
7.4	Basic concept of traffic study, Traffic safety and traffic control signal 2006.	1 / / / /	La Suration of the State of the
8	Construction equipments:	$\beta_{ij}^{(N)} = b^{(N)} \otimes 1, \forall i \in 1, \forall i \in \mathcal{I}^{(N)}$	The street of the state of the
8.1	Preliminary ideas of the following plant and equipment: Hot mixing plant	1	transfer (Caption
8.2	Tipper, tractors (wheel and crawler) scraper, bulldozer, dumpers, shovels, graders, roller dragline	2	
8.3	Asphalt mixer and tar boilers	transfer 1 Washing	description of the state of the
8.4	Road pavers	1 1 1 1 1 1 1 1 1 1	



JUBJECT- HYDRAULIC & RRIGATION INGINEERING	GANDHI INSTITUTE OF ADVANCE COMPUTER & RESEARCH	4TH SEM	FACULTY NAME – HRUSHIKESH SETHI
MODULE NO	TOPICS TO BE COVERED	NO OF PERIODS REQUIRED	TENTATIVE DATE FOR COMPLETION
1	HYDROSTATICS:	t de la latera de la	e incom paragraph and and an experience
1.1	Properties of fluid: density, specific gravity, surface tension, capillarity, viscosity and their uses	1	
1.2	Pressure and its measurements: intensity of pressure, atmospheric pressure, gauge pressure, absolute pressure and vacuum pressure; relationship between atmospheric pressure, absolute pressure and gauge pressure; pressure head; pressure gauges.	3	
1.3	Pressure exerted on an immersed surface: Total pressure, resultant pressure, expression for total pressure exerted on horizontal & vertical surface.	2	
2412012	KINEMATICS OF FLUID FLOW	Table 1 And 15 Tak	The state of the s
2.1	Basic equation of fluid flow and their application: Rate of discharge, equation of continuity of liquid flow, total energy of a liquid in motion- potential, kinetic & pressure, Bernoulli's theorem and its limitations. Practical applications of Bernoulli's equation	4	
2.2	Flow over Notches and Weirs: Notches, Weirs, types of notches and weirs, Discharge through different types of notches and weirs-their application (No Derivation)	4	
2.3	Types of flow through the pipes: uniform and non uniform; laminar and turbulent; steady and unsteady; Reynold's number and its application	3	
2.4	Losses of head of a liquid flowing through pipes: Different types of major and minor losses. Simple numerical problems on losses due to friction using Darcy's equation, Total energy lines & hydraulic gradient lines (Concept Only).	3	
2.5	Flow through the Open Channels: Types of channel sections-rectangular, trapezoidal and circular, discharge formulae- Chezy's and Manning's equation, Best economical section	2	
3	PUMPS:	ALTERNATION OF THE PROPERTY.	、的数据。然后从数据集集的创作。
(3.1 × 3.1	Type of pumps	2	u may be a selfpane Aug St
3.2	Centrifugal pump: basic principles, operation, discharge, horse power & efficiency.	2	
3.3	Reciprocating pumps: types, operation, discharge, horse power & efficiency	3	Negrada
	PART: B (Irrigation Engineering)	recover a ser la companya de la comp La companya de la co	
1	Hydrology Hydrology Cycle	2	
1.1	Rainfall: types, intensity, hyetograph	1	The state of the s
1.2	Estimation of rainfall, rain gauges, lts types(concept only)	1	Table 1
1.4	Concept of catchment area, types, run-off, estimation of flood discharge by Dicken's and Ryve's formulae	2	
2.5	Water Requirement of Crops	ZBHŽARICE MEDIEDIE	Y HEADING TO WAR.
2.1	Definition of irrigation, necessity, benefits of irrigation, types of irrigation	2	

	The second secon	1	
.2	Crop season Duty, Delta and base period their relationship,	2	
	overlap allowance, kharif and rabi crops Gross command area, culturable command area,	3	
,4	Intensity of Irrigation, irrigable area, time factor, crop		
1000	SI OW IDDICATION		
3	Canal irrigation, types of canals, loss of water in	2	
	canals	1	
3.2	Perennial irrigation	2	
3.3	Different components of irrigation canals and their		
	functions	2	
3.4 3.5	Sketches of different canal cross-sections Classification of canals according to their alignment, Various types of canal lining – Advantages and	4	
	disadvantages	THOUGHT APPLICATION	
4	WATER LOGGING AND DRAINAGE Causes and effects of water logging, detection,	3	
4.1	prevention and remedies DIVERSION HEAD WORKS AND REGULATORY		
5	STRUCTURES Necessity and objectives of diversion head works,	4	
5.1	Necessity and objectives of different parts of weirs and barrages General layout, functions of different parts of	<u>, , , , , , , , , , , , , , , , , , , </u>	
5.2		A THE PROPERTY OF THE PROPERTY	
	barrage	W 18. (1971) 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Leave The Carly of New York (S.)
5.3	Silting and scouring	35 - 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	THE COURSE OF AMPLIES AND APPLIES AND APPLIES.
5.4	Functions of regulatory structures		References State of San Artist
6.2	CROSS DRAINAGE WORKS Functions and necessity of Cross drainage works -	2	1 Paris 1 Control 1925
0.2	inter sinhon sline udasage, ic. c.	15 15 1 15 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
6.3	Concept of each with help of neat sketch		The Control of the Co
7.		2.00	
7.1	Necessity of storage reservoirs, types of dams	2	
7.2	Earthen dams: types, description, causes of	2	
7.3	Gravity dam- types, description, Causes of failure and	The Section System Section	
	Spillways- Types (With Sketch) and necessity.	1	the second respective to the service

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SUBJECT- EST-2	GANDHI INSTITUTE OF ADVANCE COMPUTER & RESEARCH	5TH SEM	FACULTY NAME – DIPTI BIBHAR
MODULE NO	TOPICS TO BE COVERED	NO OF PERIODS REQUIRED	TENTATIVE DATE FOR COMPLETION
1	Detailed estimate of culverts and bridges		
1.1	Detailed estimate of a RCC slab culvert with right angled wing walls with bar bending schedule.	3	
1.2	RCC Hume pipe culvert with splayed angled wing wall	2	
2	Estimate of irrigation structures	3	
2.1	Detailed estimate of simple type of vertical fall to given specification	3	
2.2	Detailed estimate of drainage siphon to given specification.	2	
3	Detailed estimate of roads	100	
3.1	Detail estimate of a water bound macadam road	4	
3.2	Detailed estimate of a flexible pavement in cutting / filling	2	
3.3	Detailed estimate of septic tank and soak pit for 50 users	2	
4	Miscellaneous estimates	3	
4.1	Tube well, Piles and Pile cap, Isolated and combined footings	3	
5	PWD Accounts works	1011 1111	the first of the
5.1.1	Works Classification of work-original, major, petty, repair work, annual repair, special repair, quadrantal repair	4	
5.1.2	Concept of Method of execution of works through the contractors and department, contract and agreement, work order, types of contract, piece work agreement	4	
5.2.1	Accounts of works — Explanation of various terms Administrative approval, technical sanction, tender, preparation of notice inviting tender, quotations, earnest money, E-tendering, security deposit, advance payment, intermediate payment, final payment, running bill, final bill, regular and temporary establishment, cash, major & subhead of account, temporary advance (imprest money), supervision charges, suspense account, debit, credit, book transfer, voucher and related accounts.		
5.2.2	Measurement book use & maintenance, procedure of marking entries of measurement of work and supply of materials, labour employed,	4	

1	standard measurement books and common irregularity		
5.2.3	Muster roll: Its preparation & use for making	2	
5.2.4	Acquittance Roll: Its preparation & use for making payment of pay & wages	2	
5.2.5	Labour & labour report, method of labour payment, use of forms and necessity of Submission	3	
5.2.6	Classification of stores, receipt / issue statement on standard form, method of preparation of stock account, preparation and submission of returns, verification of stocks, shortage and excess	6	
5.2.7	Building BYLAWS and REGULATORY Bodies, Development authorities, types and their levels, RERA etc.	4	

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GANDHI INSTITUTE OF ADVANCE COMPUTER & RESEARCH	5 TH SEM	FACULTY NAME - ATUL RANJAN
TOPICS TO BE COVERED	NO OF PERIODS	TENTATIVE DATE FOR COMPLETION
Quality of	REQUIRED 1	
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Necessity of treated water supply	E : 2 / 2 / 2	
	2	Markey (P. C. Mary 1997)
Methods of forecasting population, Numerical problems		
Impurities in water - organic and inorganic, riarried		
of impurities a physical chemical and bacteriological	2 5	2 9 3 5 7 5 1 6 5 7 5 7 5 6 5 6 5 6 5 6 5 6 5 6 5 6 5
Analysis of water -physical, chemical and	4 A. Martin 19, 1988 (1)	行法 分类性学 建邻环烷基 生产
Water quality standards for different uses	CANALLY SEE	
- d Convoyance of Water	1910 110 1 1 1 Page 1	· 大学 (产生) 特别的 (大学) [4]
Surface sources – Lake, stream, river and impounded		
- In descripted sources - aguifer type & occurrence -	1	
Town the second mothod's of determination, numerical	2	
problems using yield formulae (deduction excluded) Pumps for conveyance & distribution – types, selection,	2	
: [1	
3시 경쟁으로 즐겁는 그리즘 경기와 얼마와 집중한 시간에 중요한다. 그렇게 하는 것은 사람이 하다면 하게 하나면 하는 말라니다.	1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1	
:-:i I pying of nines - method	14.79 A	
Intakes – types, description of river intake, reservoir intake, canal intake		
Treatment of water		Allegations in the constant of the first of
Flow diagram of conventional water treatment system		average NO was a state of the second of the
Treatment process / units: 3.2.1 Aeration; Necessity		A STATE OF THE STA
Plain Sedimentation : Necessity, working principles,		
Sedimentation with coagulation: Necessity, principles of coagulation, types of coagulants, Flash Mixer, Flocculator,	2	W. Carlotte
Filtration: Necessity, principles, types of filters Slow Sand Filter, Rapid Sand Filter and Pressure Filter – essential		
Disinfection: Necessity, methods of disinfection Chlorination —free and combined chlorine demand, available chlorine, residual chlorine, pre-chlorination, break point chlorination,		
Softening of water – Necessity, Methods of softening – Lime soda process and Ion exchange method (Concept Only)		
Distribution system And Appurtenance in distribution		A Commence of the Commence of
General requirements, types of distribution system-gravity,	2	
Methods of supply – intermittent and continuous	Although 1 adams	a despetation of the state of the
Methods of supply - Internation and contained	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	a de de la companya d
Valves-types, features, uses, purpose-sluice valves, check	2	
	Introduction to Water Supply, Quantity and Quality of water Necessity of treated water supply Per capita demand, variation in demand and factors affecting demand Methods of forecasting population, Numerical problems using different methods Impurities in water – organic and inorganic, Harmful effects of impurities in water – physical, chemical and bacteriological Water quality standards for different uses Sources and Conveyance of water Surface sources – Lake, stream, river and impounded reservoir Underground sources – aquifer type & occurrence – Infiltration gallery, infiltration well, springs, well Yield from well- method s of determination, Numerical problems using yield formulae (deduction excluded) Pumps for conveyance & distribution – types, selection, installation. Pipe materials – necessity, suitability, merits & demerits of each type Pipe joints – necessity, types of joints, suitability, methods of jointing Laying of pipes – method Intakes – types, description of river intake, reservoir intake, canal intake Treatment of water Flow diagram of conventional water treatment system Treatment process / units: 3.2.1 Aeration; Necessity Plain Sedimentation: Necessity, working principles, Sedimentation Sedimentation with coagulation: Necessity, principles of coagulation, types of coagulants, Flash Mixer, Flocculator, Clarifier (Definition and concept only) Filtration: Necessity, principles, types of filters Slow Sand Filter, Rapid Sand Filter and Pressure Filter – essential features Disinfection: Necessity, methods of disinfection Chlorination – free and combined chlorine demand, available chlorine, residual chlorine, pre-chlorination, break point chlorination, superchlorination Softening of water – Necessity, Methods of softening – Lime soda process and lon exchange method (Concept Only) Distribution system And Appurtenance in distribution system: General requirements, types of distribution system-gravity, direct and combined Methods of supply – intermittent and continuous	Introduction to Water Supply, Quantity and Quality of water Necessity of treated water supply Per capita demand, variation in demand and factors affecting demand Methods of forecasting population, Numerical problems using different methods Impurities in water — organic and inorganic, Harmful effects of impurities Analysis of water —physical, chemical and bacteriological Analysis of water —physical, chemical impounded reservoir Underground sources — aquifer type & occurrence— Infiltration gallery, infiltration well, springs, well Yield from well—method s of determination, Numerical problems using yield formulae (deduction excluded) Pumps for conveyance & distribution — types, selection, installation. Pipe materials — necessity, suitability, merits & demerits of each type Pipe joints — necessity, suitability, merits & demerits of each type Pipe joints — necessity, types of joints, suitability, methods of jointing Laying of pipes — method Intakes — types, description of river intake, reservoir intake, canal intake Treatment of water Flow diagram of conventional water treatment system Treatment process / units: 3.2.1 Aeration; Necessity Plain Sedimentation: Necessity, working principles, Sedimentation Sedimentation with coagulation: Necessity, principles of coagulation, types of coagulants, Flash Mixer, Flocculator, Clarifier (Definition and concept only) Filtration: Necessity, principles, types of filters Slow Sand Filter, Rapid Sand Filter and Pressure Filter — essential features Disinfection: Necessity, methods of disinfection Chlorination Sedimentation and concept only) Distribution system And Appurtenance in distribution system: General requirements, types of distri

5	W/s plumbing in building :	-	
5.1	Method of connection from water mains to building supply	-	
		1	
5.2	General layout of plumbing arrangement for water supply in single storied and multi-seed and mul		
	single storied and multi-storied building as per i.S. code.	2	
6	WASTE WATER ENGINEERING-		
6.1	Introduction 6.1 Alms and ablestice 4		
6.2	Introduction 6.1 Alms and objectives of sanitary engineering	1	
6.3	Definition of terms related to sanitary engineering	1	
AND I	Systems of collection of wastes—Conservancy and Water Carriage System — features, comparison, suitability	2	
7	Quantity and Quality of sewage		The state of the said of the said
7.1	Quantity of sanitary sewage – domestic & industrial sewage,	7. U.S. 7. Spece	
	variation in sewage flow, numerical problem on computation quantity of sanitary sewage	3	
7.2	Computation of size of sewer, application of Charv's	2	
	formula, Limiting velocities of flow: self-cleaning and scouring		
7.3		The second section is a second section of the second section of the second section is a second section of the second section of the second section section is a second section of the second section s	
a de legi	General importance, strength of sewage, Characteristics of sewage-physical, chemical & biological	1 1	
7.4	Concept of sewage-sampling, tests for – solids, pH, dissolved oxygen, BOD, COD	1	
8	Sewerage system		
8.1	Types of system-separate, combined, partially separate,		n til figter en der silvelige die
	features, comparison between the types, suitability	2	
8.2	Types of system-separate, combined, partially separate, features, comparison between the types, suitability	2	
8.3	Laying of sewer-setting out sewer alignment	La Charles and the	
9	Sewer appurtenances and Sewage Disposal:	\$102.001 (10.50)	
9.1	Manholes and Lamp holes – types, features, location,	00 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
0.2	function	And the state of	White State of the Solid
9.2	Inlets, Grease & oil trap – features, location, function	1467 1 800 ad	A MARK ALSO STAPED FOR YOUR
9.3	Storm regulator, inverted siphon – features, location, function	1	
9.4	Disposal on land – sewage farming, sewage application and dosing, sewage sickness-causes and remedies	1	
9.5	Disposal by dilution – standards for disposal in different types of water bodies, self purification of stream	1 1	W. Williams
10	Sewage treatment:	Ald Health are	What the service of the service of
10.1	Principles of treatment, flow diagram of conventional treatment	1	Section 1
10.2	Primary treatment – necessity, principles, essential features, functions	2	
10.3	Secondary treatment – necessity, principles, essential features, functions	1	
11	Sanitary plumbing for building:	NA man of the Manner	
11.1	Requirements of building drainage, layout of lavatory blocks in residential buildings, layout of building drainage	2 ///	
11.2	Plumbing arrangement of single storied & multi storied building as per I.S. code practice	1	
11.3	Plumbing arrangement of single storied & multi storied building as per I.S. code practice	2	

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	TOTAL PLANCE COMPLITER & RESEARCH	5 TH SEM	FACULTY NAME- K ASHOR
ODULE NO	GANDHI INSTITUTE OF ADVANCE COMPUTER & RESEARCH TOPICS TO BE COVERED	NO OF PERIODS REQUIRED	TENTATIVE DATE FOR COMPLETION
	Entrepreneurship	1	Haranay Francis Andrew
	Concept / Meaning of Entrepreneurship, Need of	2	
	I reasonaurehin	2	THE THE PERSON AND THE
	Characteristics, Qualities and Types of entrepreneur,		
	l and an in entropreneurspip	2	
14 1977	February Pres Manager1 Forms of Business Ownership		
	Sole proprietorship, partnership forms and others	(
	T - Culturation Concent of Marie 2003	3	
	Entrepreneurial support agencies at National, State, District Level(Sources): DIC, NSIC,OSIC, SIDBI, NABARD, Commercial		
	Banks, KVIC etc Technology Business Incubators (TBI) and Science and	AT I A THE	
2	Technology Entrepreneur Parks Market Survey and Opportunity Identification (Business		
	Planning) Business Planning SSI, Ancillary Units, Tiny Units, Service	1 (1) (1)	
	Time schedule Plan, Agencies to be contacted for Project Implementation Assessment of Demand and supply and	2	
	Potential areas of Growth Identifying Business Opportunity Final Product selection	196, 11. 2 Filter	A THE RESIDENCE OF THE PROPERTY OF THE PROPERT
S. S. Arrain T.	D-eneration	, /' 2 "	entropie statistical de la
3	Project report Preparation Preliminary project report Detailed project report, Techno economic Feasibility Project Viability	3	
1 14 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Dringinles	1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (Service Control of the Control of
4 14 4 14 14 14 14 14 14 14 14 14 14 14	5 Californ of management Principles of management	3	in a goldone behild
	functions of management (planning, organizing, statuting) directing and controlling etc.) Level of Management in an		
Alexander Bar	Organisation Functional Areas of Management	wights 1 Misself	The state of the s
5.	a) Production management , Functions, Activities Productivity Quality control Production Planning and	2	
	b) Inventory Management Need for Inventory management Models/Techniques of Inventory management	2	
3. 75. N	c) Financial Management Functions of Financial	2	
18 Sept. 18	Costing (only concept) Break even Analysis Brief idea about Accounting Terminologies: Book Keeping, Journal entry Petty Cost book, P&I Accounts, Balance Sheets(only Concepts)	. 2	
	d) Marketing Management Concept of Marketing and Marketing Management Marketing Techniques (only seconts) Concept of 4P s (Price, Place, Product, Promotion)	3 //	
	e) Human Resource Management Functions of Personnel Management Manpower Planning, Recruitment, Sources of manpower, Selection process, Method of Testing, Methods of Training & Development, Payment of Wages	3	
UND WASH	Leadership and Motivation	1.0001.1000000	appropriate transferred the second
6	a) Leadership Definition and Need/Importance Qualities and functions of a leader Manager Vs Leader Style of Leadership (Autografic Democratic Participative)	2	
	b) Motivation Definition and characteristics Importance of motivation Factors affecting motivation Theories of	2	

建筑	motivation (Maslow)		
	Methods of Improving Motivation Importance of Communication in Business Types and Barriers of Communication		
7	Work Culture, TQM & Safety	indepart (1977)	
10 10 10 10 10 10 10 10 10 10 10 10 10 1	Human relationship and Performance in Organization Relations with Peers, Superiors and Subordinator		
	TQM concepts: Quality Policy, Quality Management, Quality system Accidents and Safety, Cause, preventive measures, General Safety Rules, Personal Protection Equipment(PPE)	1	
8	Legislation Legislation	Francisco de 1803 Meiller	
	a) Intellectual Property Rights(IPR), Patents, Trademarks, Copyrights b) Features of Factories Act 1948 with Amendment (only salient points) c) Features of Payment of Wages Act 1936 (only salient points)	4	
9	Smart Technology	1,0,0001,000	AND COLUMN
1 30.00	Concept of IOT, How IOT works Components of IOT, Characteristics of IOT, Categories of IOT	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
	Applications of IOT- Smart Cities, Smart Transportation, Smart Home, Smart Healthcare, Smart Industry, Smart Agriculture, Smart Energy Management etc.	2	

GIACR, Rayagada

JECT-SD-11	GANDHI INSTITUTE OF ADVANCE COMPUTER & RESEARCH	5 TH SEM	FACULTY NAME-DIPTI BIBHAR
MENO	TOPICS TO BE COVERED	NO OF PERIODS REQUIRED	TENTATIVE DATE FOR COMPLETION
	Introduction:	-11.	The state of the s
11	Common steel structures, Advantages & disadvantages of		
	steel structures		
12	Types of steel, properties of structural steel	3	Syvaria ya ibasa katale a ta
13	Rolled steel sections, special considerations in steel design	V - 2 / 2 / 2 / 2 / 2 / 2 / 2 / 2 / 2 / 2	
1.4	Loads and load combinations.		and the second of the second o
1.5	Structural analysis and design philosophy		production of the state of the
1.6	Brief review of Principles of Limit State design.		The appropriate the second of the second
(d) 2	Structural Steel Fasteners and Connections.	The second state of the second	783:
2.1	Bolted Connections	1977 - 179 R. 4 H. 1723 E. W.	
2.1.1	Classification of bolts, advantages and disadvantages of		
2.1.2	bolted connections. Different terminology, spacing and edge distance of bolt		Programme Alleria
	holes. Types of bolted connections.	· 图 · 图 [18] 3 中 · 图 / 4	The Section of the Se
2.1.3	Types of action of fasteners, assumptions and principles of	(1) (1) (1) (3) (1) (1) (1) (1) (1) (1) (1) (1) (1) (1	
2.1.5	design. Strength of plates in a joint, strength of bearing type bolts (shear capacity& bearing capacity), reduction factors, and shear capacity of HSFG bolts.	lene War	
2.1.6	Analysis & design of Joints using bearing type and HSFG bolts (except eccentric load and prying forces)	a plant of the second	
2.1.7	Efficiency of a joint.	Party and the Carlot of the Carlot	TO A STANDARD CONTRACTOR OF THE STANDARD CONTRACTOR OF THE STANDARD CONTRACTOR OF THE STANDARD CONTRACTOR OF T
2.2	Welded Connections.		The state of the state of
2.2.1	Advantages and Disadvantages of welded connection	As Art The Life will be	di d
222	Types of welded joints and specifications for welding		The state of the s
2.2.3	Design stresses in welds.	TOTAL TO PARESTON MANY OF	ACHONIN INTERIOR
2.24	Strength of welded joints.		
100 3 1	Design of Steel tension Members	of the property of the second	Alemania de la compansión
3.1	Common shapes of tension members		The dealer of the separate the first of the second
145 x 3.2	Maximum values of effective slenderness ratio.	18692. CL 3/2 SS N/C 1873 Valva do 1.3/2003/2004	Control of the Contro
3.3	Analysis and Design of tension members. (Considering strength only and concept of block shear failure.)		
证明的4倍	Design of Steel Compression members.	raging of variable the strains.	The same of the second state of the
41	Common shapes of compression members.	rodonesa d 2 NP-willia	The Annual State of the State o
4.2	Buckling class of cross sections, slenderness ratio	Carl 1 250 0 1 10 10 10 10 10 10 10 10 10 10 10 1	Carried the second of the
4.3	4.3 Design compressive stress and strength of compression members. Analysis and Design of compression members (axial load	Strong of the st	<u> </u>
4.4	only). Design of Steel beams:	<u>(</u>	gang at Mak Kanja sepek yan kasisa. An sa kin ji malahawat senti ancis
5 5.1	Common cross sections and their classification.	Analysis that agive the block	的数字 100 位 建铁矿 2000 医根部的
5.2	Deflection limits, web buckling and web crippling	carry from a 2 million water	The Partie of the Control of the Con
5.3	Design of laterally supported beams against bending and shear.	10 10 10 10 10 10 10 10 10 10 10 10 10 1	THE POPULATION OF
6	Design of Tubular Steel Structures:	3.4 (1.4 A. A. C. 2) (1.4 A.	SECURE AND
6.1	Round Tubular Sections, Permissible Stresses	· 医原物性 (1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	Takta Majadah Waliotako dalam 1885 da
6.2	Tubular Compression & Tension Members	the larger and a carrier	street bath engry die tot
6.3	Joints in Tubular trusses	AMERICA 2 TO SERVE	YETH PREVIOUS STEELS AND THE
9 3 1 7 1 2	Design of Masonry Structures:	图像图画 1 为是为为为	THE RESERVE WHEN THE PROPERTY OF THE PROPERTY
7.1	Design considerations for Masonry walls & Columns, Load Bearing & Non-Load Bearing walls, Permissible stresses, Slenderness Ratio, Effective Length, Height & Thickness.		



SUBJECT- R&BE	GANDHI INSTITUTE OF ADVANCE COMPUTER & RESEARCH	5 TH SEM	FACULTY NAME-SIBANI JENA
ODULE NO	TOPICS TO BE COVERED		
		NO OF	TENTATIVE DATE FOR
		PERIODS	COMPLETION
	Section – A: RAILWAYS	REQUIRED	ZENON
77.1	Introduction	10	
1.1	Railway terminology		
1.2	Adventor of the state of the st	1	
1.3	Advantages of railways	1	
	Classification of Indian Railways	1	
2	Permanent way	1	
2.1	Definition and components of a permanent way	1	
2.2	Concept of gauge, different gauges prevalent in India	1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	suitability of these gauges under different conditions	•	
3	Track materials		
3.1	Rails	2	And the property of the second
3.2	Functions and requirement of rails	1	
3.1.2	Types of rail sections, length of rails	. 1	
3.1.3	Rail joints – types, requirement of an ideal joint	1	11、11、11、11、11、11、11、11、11、11、11、11、11、
3.1.4	Purpose of welding of rails & its advantages	1	
3.1.5	Creep- definition, cause & prevention	1	
3.1.6	Sleepers	1	
3.1.7	Advantages & disadvantages of different types of sleepers	1	[K] [4] (Later (Later 1) [2] DA (15) (1)
3.1.8	Ballast	1	- 1 14 A 184 F. A 200 M. T. YOURS SEED
3.1.9	Functions & requirements of ballast	2	
3.1.10	Materials for ballast	2	
3.2.1	Fixtures for Broad gauge	**************************************	
3.2.2	Connection of rails to rail-fishplate, fish bolts		The Committee of the state of t
3.2.3	Connection of rails to sleepers		
4	Geometric for broad gauge	100001	
4.1	Typical cross – sections of single & double broad gauge	2 10 2	120 - 24 10 10 10 10 2 1 2 12 12 10 10 10 10 10 10 10 10 10 10 10 10 10
7.2	railway track in cutting		
4.2	Permanent & temporary land width	101111111111111111111111111111111111111	And the charge are attended as
	그는 그는 그는 그 없는 그리는 그리고 있다면 하다.		
4.3	Gradients for drainage	1 1 1 N	San San All Brook to State Supersult
4.4		1 1	
5	Points and crossings	1	
5.1		1 2 1 2 1	
5.2	Types of points & crossings with tie diagrams	Albert 1 dex	Who can be a selected and the second of a
6	Laying & maintenance of track	10.250 1 150 15	CONTRACTOR STATE
6.1	Methods of Laying & maintenance of track	100100	Statistical Memory Waying ac-
6.		25, at 28 11 year part	。 於於於,可以於四個國際的學術學院
1		Control (by to be	CONTRACTOR CONTRACTOR AS (FACTOR)
1.		Supplied the state of the state	. JELEN TEREST, A LINELASTINE ANTO LA
1 1		1000 1000 1000 1000 1000 1000 1000 100	Part Mary Charles and Control of the Control
W. 1	1.3 Classification of bridges	24 W. 1 Com	TOWNED AND THE SECOND
1		· 100 2 . 11 . 1	ORDER DES EXTREMENDOS DE
2			
2		1 - 346 1 1 M.V. A.	CRANGE AND SERVICE CO.
	2 Determination of Flood Discharge 3 Waterway & economic span	12/11/11/12	- Classic Caramanian
And the second	3 Waterway & economic span 4 Afflux, clearance & free board	1 1 1 1 1	SHOT MARKETON CONTRACTOR
The state of the s	4 Artiux, clearance & free board Bridge foundation	100	
As A State of the	Scour depth minimum depth of foundation	1 2 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
11/2/11		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
ALL YOU GET YOUR PROPERTY OF THE	Types of bridge foundations – spread foundation, pile foundation-well foundation – sinking of wells, caission		

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No.	foundation	1	
3.3	Coffer dams	1 1	
R 7 4 .	Bridge substructure and approaches	1	
4.1	Types of piers	1	1
4.2	Types of abutments	71 -0 1	Lieb Charles At Lite
4.3	Types of wing walls	1 1	and the state of t
4.4	Approaches	1	1 1 1 1 1
5	Culvert & Cause ways	1	Application of the second second
5.1	Types of culvers – brief description	1	
5.2	Types of causeways – brief description	2	An interest in the Control of the Control of the

SUBJECT- ACTE	GANDHI INSTITUTE OF ADVANCE COMPUTER & RESEARCH	6 TH SEM	FACULTY NAME-DIPTI BIBHAR
NODULE NO	TOPICS TO BE COVERED	NO OF PERIODS REQUIRED	TENTATIVE DATE FOR COMPLETION
1	Advanced construction materials	1	
1.1	Fibers and PlasticsTypes of fibers- Steel, Carbon, glass fibers, Use of fibers as construction material, properties of Fibers. Types of plastics- PVC, RPVC, HDPE, FRP, GRP etc. Colored plastic sheets. Use of plastic as construction material.	2	
1.2	Artificial Timbers – Properties and uses of artificial timber. Types of artificial timber available in market, strength of artificial timber.	1798 2	The state of the second of
1.3	Miscellaneous materials – Properties and uses of acoustics materials, wall claddings, plaster boards, micro-silica, artificial sand, bonding agents, adhesives etc.	2	
2	Prefabrication	1	V. V.
2.1	Introduction, necessity and scope of prefabrication of buildings, history of prefabrication, current uses of prefabrication , types of prefabricated systems, classification of prefabrication, advantages and disadvantages of prefabrication.	2	
2.2	The theory and process of prefabrication, design principle of prefabricated systems, types of prefabricated elements, modular coordination	1	
2.3	Indian standard recommendation for modular planning	1.	
3	Earthquake Resistant Construction	1	The American State of the State
3.1	Building Configuration	1	and a large process of the control of the
	Lateral Load resisting structures	1	
3.2	Building characteristics	1	14 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
3.3	Effect of structural irregularities-vertical irregularities, plan	1	
3.5	Safety consideration during additional construction and alteration of existing Buildings.	2 4	
3.6	Additional strengthening measures in masonry building- corner reinforcement, lintel band, sill band, plinth band, roof band, gable band etc.		
4	Petrofitting of Structures	1	
4.1	Seismic retrofitting of reinforced concrete buildings:	2 2 3 4 4	
4.2	Sources of weakness in RC frame building	2	
4.3	Classification of retrofitting techniques and their uses	2	
4.3 5	Puilding Services	2.5	The Michael Market Commence of the
5.1	Cold Water Distribution in high rise building, lay out of	3	
5.2	Hot water supply – General principles for central plants-	2	
5.3	3 Sanitation –soil and waste water installation in high rise	4	
5.4	Electrical services – i) requirements in high rise buildings ii) Layout of wiring - types of wiring iii) Fuses and their types iv) Earthing and their uses	2	,
5.5	Lighting – Requirement of lighting, Measurement or light	2	
5.6	Ventilation - Methods of ventilation (Natural and artificial	2	Washington and the second
5.7	Mechanical Services- Lifts, Escalator, Elevators – types and uses.		

	Construction and earth moving equipments -	Million (1 this first	AND AND PROPERTY OF STREET
6	Construction and earth moving	2	则是"绝对"。"这种的现在分词的
6.1	Planning and selection of construction equipments	TOTAL AND CHARLES OF	
	Study on earth moving equipments like drag line, tractor, buildozer, Power shovel	The Indian	and the second s
6.3	Study and uses of compacting equipments like tamping rollers, Smooth wheel rollers, Pneumatic tired rollers and vibrating compactors	2	
6.4	Owning and operating cost – problems		
7.7	Soil reinforcing techniques	egy a see Law eye e g	Was a second a Warrant was in
7.1	Necessity of soil reinforcing.	1	a the control of the state of the
	to much and geo-synthetics	27.581819 1 (1861)	A CONTRACTOR OF THE CONTRACTOR
7.2	Strengthening of embankments, Slope stabilization in cutting	[1] 2 [2] 1 [4] [4] [4]	
7.3	and embankments by soil reinforcing techniques.		

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SUBJECT-CM	GANDHI INSTITUTE OF ADVANCE COMPUTER & RESEARCH	6 ^{nt} SEM	FACULTY NAME-SRABANEE GIRI
NODULE NO	TOPICS TO BE COVERED	NO OF PERIODS REQUIRED	TENTATIVE DATE FOR COMPLETION
1	Introduction To Construction Management	1	
1.1	Aims and objectives of construction management.	1	
1.2	Functions of construction management	1	
1.3	The construction team componentsowner, engineer, architect, contractor-their functions and interrelationship and jurisdiction	1	
1.4	Resources for construction management- men,machines,materials,money	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
2	Constructional Planning	1	the water of the state of the
2.1	Importance of Construction Planning	1	[1] [1] [1] [1] [2] [2] [3] [3] [4] [4] [4] [4]
2.2	Developing work breakdown structure for construction work	1	THE STATE OF THE BUTCH
2.3	Construction Planning stages-Pre-tender stage, Post-tender stage	1	
2.4	Construction scheduling by Bar charts-preparation of Bar Charts for simple construction wo	And 1 (1)	
2.5	Preparation of schedules for labour materials, machinery, finance for small works	1	
2.6	Limitation of Bar charts	1	B. All Property of the contract of
2.7	Construction scheduling by network techniques-defination of terms ,PERT and CPM techniques, advantages and disadvantages of two techniques, network analysis, estimation of time and critical path, application of PERT and		
	CPM techniques in sample construction works.	The state of	
3	Materials and Stores Management	# 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	A Company of the control of the cont
3.1	Classification of Stores-storage of stock	W 1	
3.2	Issue of materials-indent , invoice, bin card	*** ***1	The state of the state of the state of
4	Construction Site Management	1	
4.1	Job Lay out-Objectives, Review plans, specifications, Lay out of equipments.		All for the second of the seco
4.2	Location of equipment, organizing labour at site.	1	
4.3	Job lay out for different construction sites.	1	
	Principle of storing material at site.	1	The Mary Tay of Marking Market Com-
4.4	Construction Organization:	1	Land Company of the Company
5 S	Introduction – Characteristics, Structure, Importance	1	and the second
5.1 5.2	Organization types-line and staff, functions and their		
5.3	Principles of organization- meaning and significance of terms- control, authority, responsibility, job & task.	The state of the s	
5.4	Leadership-necessity, styles of leadership, role of leader	1180 1	
5.5	Human relations-relations with subordinates, peers, Supervisors, characteristics of group behavior, mob psychology, handling of grievances, absenteeism, labour welfare	1	
5.6	Conflicts in organization-genesis of conflicts, types- intrapersonal, interpersonal, intergroup, resolving conflicts		
6	Construction Labour and Labour Management:		
	Preparing Labour schedule	A. W. 1	1.15
6.1	Essential steps for optimum labour output	1	
6.3	Labour characteristics		
6.4	Wages & their payment	1	
6.5	Labour incentives	1 10 11-11	ATT 10 4

6.6	Motivation- Classification of motives, different approaches	1,000 100 100 100 100 100 100 100 100 10	
	to motivation		· · · · · · · · · · · · · · · · · · ·
7	Equipment Management	1 1 1	10.1 18.0 16.7 16.0 16.1 16.1 16.1 16.1 16.1 16.1 16.1
7.1	Preparing the equipment schedule	447.1	
7.2	Preparing the equipment	2	
7.3	I Importance of Owning & Operating Costs		dr. 14 at 15 at 15 at 16
	for hising & nurchase of equipment	1	
	Inspection and testing of equipment	1	
7.4	Equipment maintenance	1 mil 1 mil	
7.5	Quality Control	1 1	and the state of t
8	Concept of quality in construction after construction,	2 50	
8.1	Concept of quality in construction Quality Standards- during construction, after construction,	ANG LESSON	Company of the compan
8.2	destructive & non destructive methods.	111 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
# 1/1 "	destructive & non desd do	98930 1893 989351848	The transfer of the second second second
.9	Monitoring Progress		and Markey to be what held
9.1	Programme and progress of work	10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	The section is a second of the second
9.2	Work study and financial progress	1	
9.3	Work study Analysis and control of physical and financial progress		The state of the s
	measures.	1	- Comment Programme
10	Safety Management In Construction	2	A VIND A SHEAR GRANNING
10.1		ng 1 14	A Comment of the Comm
10.2		1	
		Maria de la Constantion de la	D. All Mary Hall and Street Street
10.3	common fabrication and election,	7716 1 THE	T. Anti-Things-services and their
	Development of safety consciousness Development of safety consciousness	1 1	
10.4	Development of safety consciousness Safety legislation- Workman's compensation act, contract	Pitter Will	Complete the second of the sec
10.5	labour act	130 - 1 (150)	grant transport to the transport
A STATE OF	Role of Vulnerability Atlas of India in construction projects	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	a subject to the same
11	Role of Vulnerability Atlas of India to Concepts of Introduction to Vulnerability Atlas of India, Concepts of	de Til	and the state of the state of
11.1	Langed and disasters and volle-		Lange Allender Strategic
		w. of traffic View	· · · · · · · · · · · · · · · · · · ·
PRINCE			
11.2	Earthquake hazard and vuinerability, integrated and representation intensity scales of earthquake, seismic zones, earthquake intensity scales of earthquake, seismic zones, earthquake	149 / / / /	K. L. G. Paller L. W. Salvak
	mane types of structures and damage		S. A. J. Shirts and M. C.
		and the 1 five	A SEPTEMBER OF THE SECOND
MANERY C			
11.3	Wind / Cyclone hazard and cyclone occurrence maps, storm pressures, wind hazard and cyclone occurrence maps, storm		
		The state of the state of	TO STAND THE ELECTRICAL TO STAND THE
情要提高。		11:11 1 K	
11.4	Flood hazard and vulnerability, Flood hazard prone areas of the country, General protection of habitants		
		The same of the same	and the second second second
dy the		1100 1	
11.5	Landslides, Tsunamis and Thunderstorm Incidence maps, vulnerability, Landslide & Thunderstorm Incidence maps,		
Matte.		新2.87 Line	The second secon
	1 the sick tables and usake of vulleration	11/1/12	
11.6	atlas of India, Inclusion of vulnerability atlas in Tender	WENTER	
	atlas of India, inclusion of Vante. Comp. documents.	得。 於 問 是 用 大 等 し 計	The state of the s

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SUBJECT- SURVEY-II	GANDHI INSTITUTE OF ADVANCE COMPUTER & RESEARCH	6 TH SEM	FACULTY NAME-SIBANI JENA
MODULE NO	TOPICS TO BE COVERED	NO OF PERIODS REQUIRED	TENTATIVE DATE FOR COMPLETION
1	TACHEOMETRY:	ar. To 1 before	建了军部的连接基本的和中国《阿克特· 冯尔
1.1	Principles, stadia constants determination	Terretta 1 mary	
1.2	Stadia tacheometry with staff held vertical and with line of collimation horizontal or inclined, numerical problems	3	新用度2000年, 有6.7%,10.7%。2000年,10.8%。
1.3	Elevations and distances of staff stations – numerical problems	2	The transfer of the second of
2 1	CURVES	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	不为自由的主义的一个企业是对自己的企
2.1	compound, reverse and transition curve, Purpose & use of different types of curves in field	1 (100)	
2.2	Elements of circular curves, numerical problems	THE PROPERTY OF THE PARTY OF TH	(地方)的现在分词的特殊的现在分类的
2.3	Preparation of curve table for setting out		Favore, Calcord to a villa traction in the
2.4	Setting out of circular curve by chain and tape and by instrument angular methods (i) offsets from long chord, (ii) successive bisection of arc, (iii) offsets from tangents, (iv) offsets from chord produced, (v) Rankine's method of tangent angles (No derivation)	5	
2.5	Obstacles in curve ranging – point of intersection inaccessible	1	
使用成3 出心。	BASICS ON SCALE AND BASICS OF MAP:	, doe 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	An transport of the Armer Makes
3.1	Fractional or Ratio Scale, Linear Scale, Graphical Scale	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	The production of the state of the same
3.2	What is Map, Map Scale and Map Projections	200 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2	。这些活力是是华拉美的企业的大学活场的
3.3	How Maps Convey Location and Extent		。 1957年,第15日,1957年,1957年,1957年,1957年,1957年,1957年,1957年,1957年,1957年,1957年,1957年,1957年,1957年,1957年,1957年,1957年,19
3.4	How Maps Convey characteristics of features	1 2 (V	图为自由"特别的"的特别。
3.5	How Maps Convey Spatial Relationship	2.	言方常用字。超过的智慧的智慧的是一般都
3.5.1	Classification of Maps Physical Map, Topographic Map, Road Map, Political Map Economic & Resources Map , Thematic Map , Climate Map	3	
25 4 E	SURVEY OF INDIA MAP SERIES:	981. F 1 1 1 1 1 1 4 4	The second of the second of the second
4.1	Open Series map	2	COLL COLL WILL BUILD A WAR WHAT SHIPS
4.2 X	Defense Series Map	1 / 1 / WWW	TO SECURISH WHERE VERY COURSE
4.3	Map Nomenclature Quadrangle Name ,Latitude, Longitude, UTM's Contour Lines Magnetic Declination Public Land Survey System Field Notes	2	
Maria 5 (6)	BASICS OF AERIAL PHOTOGRAPHY, PHOTOGRAMMETRY, DEM AND ORTHO IMAGE GENERATION:	/2	
5.1	Aerial Photography: Film, Focal Length, Scale Types of Aerial Photographs (Oblique, Straight)	- a 1 a a b b b b b b b	
5.2	Photogrammetry: Classification of Photogrammetry , Aerial Photogrammetry Terrestrial Photogrammetry	3 10.1	
5.3	Photogrammetry Process: Acquisition of Imagery using aerial and satellite platform Control Survey Geometric Distortion in Imagery Application of Imagery and its support data Orientation and Triangulation Stereoscopic Measurement X-parallax Y-parallax DTM/DEM Generation Ortho Image Generation	4	
6	MODERN SURVEYING METHODS:	924 V 1 Ward	The Hall the state of the state
6.1	Principles, features and use of (i) Micro-optic theodolite, digital theodolite	1	AT THE RESERVE OF THE PARTY OF
6.2	Working principles of a Total Station (Set up and use of total station to measure angles, distances of points under survey from 44461 station and the meantinging (My & B or marshing easting, and elevation) of surveyed points relative to Total	2	margae dan saada ka

PARALET !	Station position using trigonometry and triangulation.	number bergan	Maria amas Astesi 1939 Parana
147.7	BASICS ON GPS & DGPS AND ETS:	John Ch. 2 Roman	
7.1	GPS: - Global Positioning Working Principle of GPS,GPS Signals, Errors of GPS,Positioning Methods	3	
7.2	DGPS: - Differential Global Positioning System Base Station Setup Rover GPS Set up Download, Post-Process and Export GPS data Sequence to download GPS data from flashcards Sequence to Post-Process GPS data Sequence to export post process GPS data Sequence to export GPS Time tags to file	3	
7.3	ETS: - Electronic Total Station Distance Measurement Angle Measurement Leveling Determining position Reference networks Errors and Accuracy	1	
8	BASICS OF GIS AND MAP PREPARATION USING GIS	40 J. 14 45 Ja	The Thirty Comments of the Com
8.1	Components of GIS, Integration of Spatial and Attribute Information	3	
8.2	Three Views of Information System Database or Table View, Map View and Model View	2	
8.3	Spatial Data Model	14000	
8.4	Attribute Data Management and Metadata Concept	102. 102.	PARESTER A TO TO TO THE PERSON TO
8.5	Prepare data and adding to Arc Map	· 14.1 (1.1) [1.1]	THE STATE OF THE S
8.6	Organizing data as layers	greed which	
8.7	Editing the layers.	李纳州 1 49000	The state of the s
8.8	Switching to Layout View	30 M 160 M 7	Commence to the second of the second of the second
8.9	Change page orientation.	9839 6 1 100 66	
8.10	Removing Borders	1.	The Big British State Co., 25 to 1 to 25 (4) 9 5 CA.
8.11	Adding and editing map information.	2000 1 1	Ten Jack district Antiques (Action
8.17	Finalize the map	1	