



Scheme of Studies & Examinations

Department: Civil Engineering – 6th Semester

Sr. No	Course No.	Course Title	Teaching Schedule			Marks of class work	Examination Marks		Total	Credit	Duration of Exam
			L	T	P		Theory	practical			
1	CE 302 B	REINFORCED CONCRETE DESIGN - II	3	2	-	25	75	-	100	5	4
2	CE 304 B	DESIGN OF STEEL STRUCTURES – I	3	2	-	25	75	-	100	5	3
3	CE 306 B	FOUNDATION ENGINEERING	3	1	-	25	75	-	100	4	3
4	CE 308 B	STRUCTURAL ANALYSIS - III	3	2	-	25	75	-	100	5	3
5	CE 310 B	TRANSPORTATION ENGINEERING - II	3	1	-	25	75	-	100	4	3
6	CE 312 B	ENVIRONMENTAL ENGINEERING - II	3	1	-	25	75	-	100	4	3
7	CE 314 B	REINFORCED CONCRETE DESIGN – II LAB	-	-	2	20	-	30	50	1	3
8	CE 316 B	FOUNDATION ENGINEERING LAB	-	-	2	20	-	30	50	1	3
9	CE 318 B	ENVIRONMENTAL ENGINEERING - II LAB	-	-	2	20	-	30	50	1	3
10	HUM 302 B	REPORT WRITING SKILLS	-	-	2	25	50	-	75	2	3
11	HUM 304 B	ORAL PRESENTATION SKILLS	-	-	2	20	-	30	50	1	3
12	GPCE 302 B	GENERAL PROFICIENCY & ETHICS	1	-	-	75	-	-	75	2	-
Total			19	9	8	330	500	120	950	35	

Note:

1. The students will be allowed to use non-programmable scientific calculator. However, sharing/exchange of calculator is prohibited in the examination.
2. Electronics gadgets including Cellular phones are not allowed in the examination.
3. Each student has to undergo Professional Training of at least 4 weeks from the industry, institute, research lab, training center etc during summer vacation and its evaluation shall be carried out in the VII semester.



SYLLABUS: B Tech (CE)

Department: Civil Engineering – 6th Semester

Subject: Reinforced Concrete Design II (Theory)

Subject Code: CSE-302B

Detailed Content

Unit No.1 Continuous Beams and slabs, Flat slabs

- Topic No.1 : Basic assumptions, Moment of inertia
- Topic No.2 : Settlements, Modification of moments
- Topic No.3 : Maximum moments and shear
- Topic No.4 : Redistribution of moments for single and multi-span beams, design examples
- Topic No.5 : Advantages of flat slabs, general design considerations
- Topic No.6 : Approximate direct design method
- Topic No.7 : Design of flat slabs, design examples

Unit No.2 Foundations

- Topic No.8 : Isolated footings
- Topic No.9 : Combined rectangular footing
- Topic No.10: Combined trapezoidal footing
- Topic No.11: Strip footing
- Topic No.12: Strap footing
- Topic No.13: Raft footing

Unit No.3 Design of curved beams in plan, Design of Domes

- Topic No.14: Analysis and Design of curved beams fixed at both ends
- Topic No.15: Analysis and Design of ring beams
- Topic No.16: Meridional and hoop stress in spherical domes
- Topic No.17: Meridional and hoop stress in conical domes
- Topic No.18: Design of domes

Unit No.4 Retaining walls, Water Tanks

- Topic No.19: Design of cantilever and counter fort type retaining walls
- Topic No.20: Estimation of Wind and earthquake forces
- Topic No.21: Design requirements
- Topic No.22: Rectangular and cylindrical underground
- Topic No.23: Intze tanks, design considerations, design examples

Study Scheme				Evaluation Scheme			Total Marks
Lectures per week		P	Credits	Internal Assessment	External Assessment (Examination)		
L	T			Max. Marks	Max. Marks	Exam Duration	
3	2	-	5	25	75	3 hours	100

TEXT BOOKS:

1. Reinforced Concrete Structures, P. C. Varghese, Tata McGraw Hill
2. Advanced Reinforced Concrete Structures, P. C. Varghese, Tata McGraw Hill
3. Reinforced Concrete Design, M.L. Gambhir, Macmillan India Ltd., New Delhi
4. Limit State Design of Reinforced Concrete, A.K. Jain, Nem Chand and Bros., Roorkee
5. Behaviour, Analysis and Design of R.C.C. Structural Elements, I.C. Syal and Ummat, A.H. Wheelers, New Delhi

REFERENCE BOOKS:

1. IS:456 2000
2. IS 3370 2009
3. Plain and Reinforced concrete, Vol. 2, O P Jain and J. Krishna, Nem Chand and Bros., Roorkee
4. Reinforced Concrete Design, S U Pillai and D Menon, Tata McGraw Hill



SYLLABUS: B Tech (CE)

Department: Civil Engineering – 6th Semester

Subject: Design Of Steel Structures I (Theory)

Subject Code: CSE-304B

Detailed Content

Unit No.1 Introduction, Structural Fasteners and Connections

- Topic No.1 : Loads, structural steels and their specifications, structural elements
- Topic No.2 : Steel vs. concrete and timber, design approaches—elastic and limit state methods
- Topic No.3 : Design specifications as per IS: 800, structural layout
- Topic No.4 : Strength and stiffness considerations, efficiency of cross-section
- Topic No.5 : Safety and serviceability considerations
- Topic No.6 : Riveting and bolting, their types, failure of riveted joint
- Topic No.7 : Efficiency of a joint, design of riveted joint, concentric riveted joints
- Topic No.8 : Advantages and disadvantages of bolted connections, stresses in bolts
- Topic No.9 : Types of welded joints, design of welded joint subjected to axial loads
- Topic No.10: Welded joints subjected to eccentric loads
- Topic No.11: Simple, semi-rigid and rigid connections.

Unit No.2 Tension Members, Compression Members

- Topic No.12: Axially loaded columns, effective length, slenderness ratio
- Topic No.13: Allowable stresses, general specifications, design of axially loaded members
- Topic No.14: Laced and battened columns and their design, built up compression members
- Topic No.15: Eccentrically loaded columns and their design
- Topic No.16: Column splice and its design, encased columns

Unit No.3 Flexural Members, Column Bases

- Topic No.17: Design criteria, permissible stresses, laterally supported beams and their design
- Topic No.18: Web buckling, web crippling, built up beams, encased beams
- Topic No.19: Members subjected to bending and compression, Plate Girders: Introduction, weight and economic depth
- Topic No.20: Design of flanges, design of web, curtailment of flange plates
- Topic No.21: Intermediate and bearing stiffeners, design of a riveted plate girders
- Topic No.22: Introduction, slab base, gusseted base, column base subjected to moment, grillage foundation

Unit No.4 Tubular Structures, Aluminium Structures

- Topic No.23: Permissible stresses, tube columns and compression members
- Topic No.24: Tube tension members, tubular roof trusses
- Topic No.25: Joints in tubular trusses, tubular beams and purlins
- Topic No.26: Permissible stresses, tension members
- Topic No.27: Compression members, local buckling of compression members
- Topic No.28: Design of beams and connections

Study Scheme				Evaluation Scheme			Total Marks
Lectures per week		Internal Assessment		External Assessment (Examination)			
L	T	P	Credits	Max. Marks	Max. Marks	Exam Duration	
3	2	-	5	25	75	3 hours	100

TEXT BOOKS:

1. Design of Steel Structures, Vol. 1 and Vol. II, Ram Chandara, Standard Book House.
2. Design of Steel Structures, by A.S. Arya and J.L. Ajmani. , Nem Chand Brothers, Roorkee.

REFERENCE BOOKS:

1. Design of Steel Structures, P. Dayaratnam, Wheeler Publishing, New Delhi.
2. Design of Steel Structures, M. Raghupathi, Tata McGraw Hill, New Delhi.



SYLLABUS: B Tech (CE)

Department: Civil Engineering – 6th Semester

Subject: Foundation Engineering (Theory)

Subject Code: CSE-306B

Detailed Content

Unit No.1 Introduction to soil exploration, Earth Pressure

- Topic No.1 : Scope, soil exploration for different structures, spacing
- Topic No.2 : Significant depth, boring and sampling techniques, types of samples
- Topic No.3 : Penetration test (SCP and SPT)
- Topic No.4 : Sample disturbances and Geophysical methods
- Topic No.5 : Earth Pressures at rest condition, states of plastic equilibrium
- Topic No.6 : Rankine and Coulomb's theories for active and passive conditions
- Topic No.7 : Influence of surcharge, water table, wall friction
- Topic No.8 : Rehmann's and Culmann's graphical methods, open cuts, Retaining Walls

Unit No.2 Stability of Slopes, Design of Shallow Foundation

- Topic No.9 : Infinite slope, types of failure, total and effective stress analysis
- Topic No.10: Taylor's stability numbers, concept of factors of safety, Swedish's circle method
- Topic No.11: Friction circle method
- Topic No.12: Effect of sudden draw down and submergence
- Topic No.13: Bearing Capacity, Definitions, depth of foundation, Terzaghi's general bearing capacity equation
- Topic No.14: IS code equation, factors affecting bearing capacity
- Topic No.15: Settlements for clays and sands, permissible settlements
- Topic No.16: Bearing capacity by penetration tests, plate load test
- Topic No.17: Types of Shallow Foundations, Design Criteria
- Topic No.18: Stability, Shear, and Settlement Failures, Influence of eccentric and inclined loads

Unit No.3 Pile Foundations, Caissons and Wells

- Topic No.19: Types, function, selection of piles, pile driving formulae
- Topic No.20: Equipment, point, bearing and friction piles. Load carrying capacity of single pile
- Topic No.21: Group action, spacing of piles, Negative skin friction
- Topic No.22: Piles subjected to lateral loads, settlement of pile groups, under reamed piles
- Topic No.23: Introduction, components, shapes, stability of well foundation
- Topic No.24: Terzaghi's method of analysis, sinking of well, tilts and shifts

Unit No.3 Foundation in Difficult Grounds, Machine Foundation

- Topic No.25: Ground Improvement techniques, drainage and dewatering
- Topic No.26: Foundation in Swelling Soils, use of Soil reinforcement
- Topic No.27: Definition, types, problem of machine foundation, spring mass analogy
- Topic No.28: Coefficient of elastic uniform compression, free and damped vibration
- Topic No.29: Block foundation test, Cyclic plate load test
- Topic No.30: Mathematical models, design criteria

Study Scheme				Evaluation Scheme			Total Marks
L	T	P	Credits	Internal Assessment	External Assessment (Examination)		
				Max. Marks	Max. Marks	Exam Duration	
3	1	-	4	25	75	3 hours	100

TEXT BOOKS:

1. Basic and Applied Soil Mechanics, by Gopal Ranjan Rao, ASR Rao, New Age Int. (P) Ltd. Pub., New Delhi,
2. Soils and Foundations, by Cheng Liu & Jack B Evett, Prentice-Hall Inc., USA.
3. A Text Book of Soil Mechanics Foundation Engg. by VNS Murthy – U.B.S, New Delhi.



PM
COLLEGE OF ENGINEERING

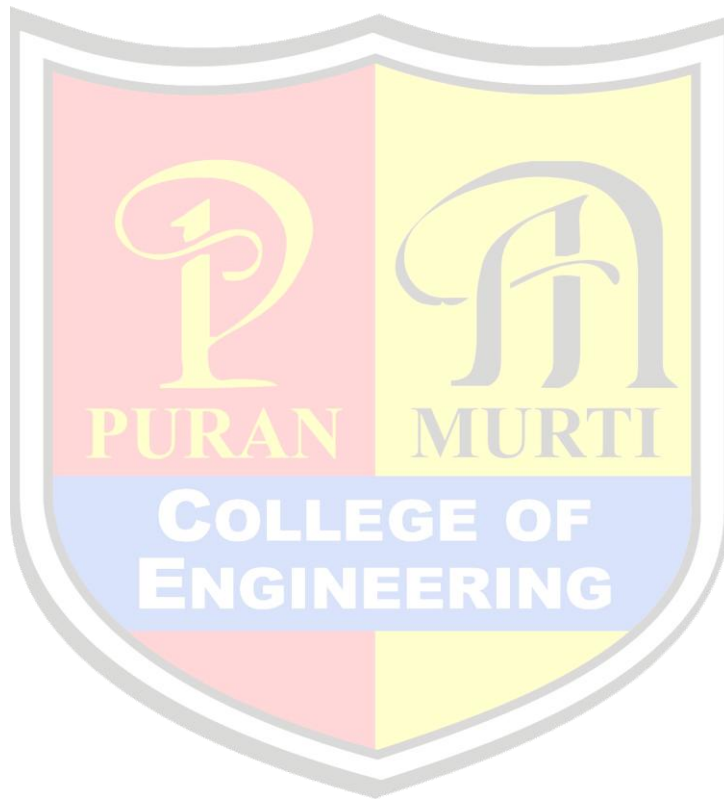
A Unit of Puran Murti Educational Society
Approved by AICTE, Ministry of HRD, Govt. of India,
Affiliated to Deenbandhu Chhotu Ram University of Science & Technology

REFERENCE BOOKS:

1. Foundation Analysis and Design, by J.E. Bowles McGraw Hill Book Company, New York.
2. Foundation Engineering by Peck, Wiley Eastern India Limited, New Delhi.
3. Soil Mechanics & Foundation Engineering, by K.R. Arora, Standard Publishers, New Delhi.
4. Soil Dynamics and Machine Foundations by Swami Saran, Galgotia Publishers, New Delhi.

Note:

1. In the semester examination, the examiner will set two questions from each unit (total 08 questions in all), covering the entire syllabus. The students will be required to attempt only 5 questions selecting at least one question from each unit.
2. The use of scientific calculator will be allowed in the examination. However, programmable calculator and cellular phone will not be allowed.





SYLLABUS: B Tech (CE)

Department: Civil Engineering – 6th Semester

Subject: Structural Analysis – III (Theory)

Subject Code: CSE-308B

Detailed Content

Unit No.1 Introduction, Matrix Force Method

- Topic No.1 : Introduction to matrix algebra, systems approach: force and displacement methods and their comparison
- Topic No.2 : Introduction to flexibility approach, Choice of redundant
- Topic No.3 : Static equilibrium matrix, deformation compatibility matrix
- Topic No.4 : Member flexibility matrix,
- Topic No.5 : Static equilibrium and deformation compatibility checks
- Topic No.6 : Application for trusses, continuous beams and rigid frames

Unit No.2 The matrix displacement or Stiffness Method, Formulation of various matrices

- Topic No.7 : Conditions of stress-strain relationships, equilibrium and compatibility
- Topic No.8 : Application for trusses, continuous beams and rigid frames
- Topic No.9 : Static equilibrium matrix - deformation compatibility matrix
- Topic No.10: Member stiffness matrix, global stiffness matrix
- Topic No.11: External load matrix, static equilibrium and deformation
- Topic No.12: Compatibility checks and effects of support settlement and lack of fit
- Topic No.13: Conversion of member loads into joint loads
- Topic No.14: Partitioning of global stiffness matrix

Unit No.3 Direct Stiffness Method

- Topic No.15: Derivation of global matrix from energy considerations
- Topic No.16: Transformation matrices
- Topic No.17: Member stiffness matrix with respect to member coordinate system
- Topic No.18: Member stiffness matrix for global coordinates and global stiffness matrix
- Topic No.19: Displacement boundary conditions
- Topic No.20: Computer generation of global stiffness matrix
- Topic No.21: Effect of temperature and lack of fit

Unit No.4 Pumps and pumping stations, Small scale and household level water purification system and water fixtures

- Topic No.22: Introduction and basic concepts
- Topic No.23: Energy approach and variation principles in Finite-Element Method
- Topic No.24: Various element shapes, 1-D bar element

Study Scheme				Evaluation Scheme			Total Marks
Lectures per week		Internal Assessment		External Assessment (Examination)			
L	T	P	Credits	Max. Marks	Max. Marks	Exam Duration	
3	2	-	5	25	75	3 hours	100

TEXT BOOKS:

1. Matrix Analysis of Framed Structures, Gere and Weaver, CBS Publishers & Distributors.
2. Basic Structural Analysis, C.S. Reddy, Tata McGraw Hill Publication.

REFERENCE BOOKS:

1. Matrix method of Analysis, Martin, McGraw Hill Book Company, New York.
- Structural Analysis – A Unified Approach, D.S. Prakash Rao, Tata McGraw Hill Publishing Co., New Delhi.

Note:

1. In the semester examination, the examiner will set two questions from each unit (total 08 questions in all), covering the entire syllabus. The students will be required to attempt only 5 questions selecting at least one question from each unit.
2. The use of scientific calculator will be allowed in the examination. However, programmable calculator and cellular phone will not be allowed.



SYLLABUS: B Tech (CIVIL)

Department: Civil Engineering – 6th Semester

Subject: Transportation Engineering - II (Theory)

Subject Code: CSE-310B

Detailed Content

Unit No.1 Introduction, Permanent way and components, Sleepers, Ballast

- Topic No.1 : Role of railways in transportation, historical development of railways
- Topic No.2 : Gauges in railway tracks, typical railway track cross-section, coning of wheels
- Topic No.3 : Function of rails, requirement of rails, types of rail sections – comparison of rail types
- Topic No.4 : Length of rail, rail wear, rail failures, creep of rails
- Topic No.5 : Functions and requirements of sleepers, classification of sleepers, timber, metal and concrete sleeper
- Topic No.6 : Comparison of different types of sleepers, spacing of sleepers and sleeper density
- Topic No.7 : Function and requirements of ballast, types, comparison of ballast materials

Unit No.2 Geometric design, Points and crossings

- Topic No.8 : Vertical and horizontal alignment, horizontal curves
- Topic No.9 : Super elevation, equilibrium, cant and cant deficiency, length of transition curve
- Topic No.10: Gradients and grade compensation. Stations and yards, and their classification
- Topic No.11: Introduction, necessity of points and crossings, turnouts
- Topic No.12: Points and crossings, design of a simple turnout

Unit No.3 Track safety, Signaling and Interlocking, Tunnels

- Topic No.13: Objects of signaling, engineering principle of signaling, classification
- Topic No.14: Control of train movements, absolute, automatic block system, centralized control system
- Topic No.15: ATS. Interlocking: definition, necessity and function
- Topic No.16: Methods of interlocking, mechanical devices for interlocking
- Topic No.17: Traction and tractive resistance, stresses in track, Equipments, Mechanized Maintenance, Track Recording & track Tolerances, Mass Rapid Transport Systems
- Topic No.18: High Speed Trains, Present & Future
- Topic No.19: Modernization of railway tracks, railway systems in modern era
- Topic No.20: Advantages, limitations and suitability, shafts, pilot tunnels
- Topic No.21: Methods of driving tunnels in rocks and soft grounds. Stress around the tunnels

Unit No.4 Airport Engineering, Airport Design, Air traffic control aids

- Topic No.22: Brief history of air transport: Aircraft characteristics. Airport site selection
- Topic No.23: Various surveys for site selection. Classifications of obstructions
- Topic No.24: Imaginary surfaces, Approach zone and turning zone. Runway orientation, basic runway length
- Topic No.25: Imaginary surfaces, Approach zone and turning zone. Runway orientation, basic runway length
- Topic No.26: Runway geometric design, airport capacity, factors controlling taxiway layout
- Topic No.27: Geometric design standards for taxiway holding aprons. Terminal area, building area, parking area, apron, hanger typical airport layouts
- Topic No.28: LCN/PCN method of rigid pavement design. Trend growth of Domestic Air Traffic in India, Air Cargo
- Topic No.29: Visual aids, marking and lighting of runway and apron area
- Topic No.30: Wind and landing direction indicator

Study Scheme				Evaluation Scheme			Total Marks
Lectures per week		Internal Assessment		External Assessment (Examination)			
L	T	P	Credits	Max. Marks	Max. Marks	Exam Duration	
3	1	-	4	25	75	3 hours	100

TEXT BOOKS:

1. Railway Engineering by Arora and Saxena, Dhanpat Rai & Sons, New Delhi
2. Airport Planning and Design by Khanna, Arora & Jain, Nem Chand & Brothers, Roorkee

REFERENCE BOOKS:



PM

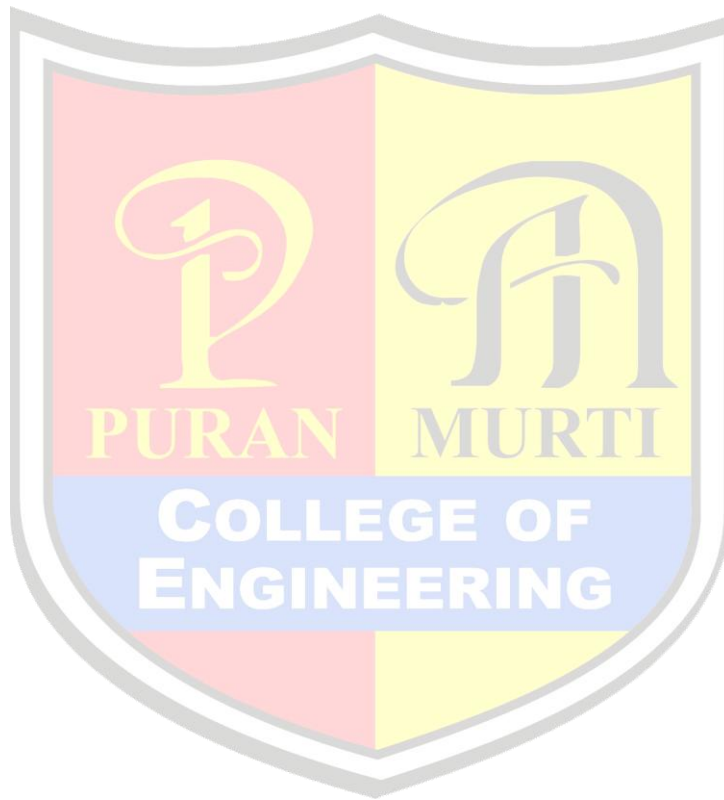
COLLEGE OF ENGINEERING

A Unit of Puran Murti Educational Society
Approved by AICTE, Ministry of HRD, Govt. of India,
Affiliated to Deenbandhu Chhotu Ram University of Science & Technology

1. Railway Engineering by Rangawala, Charotar Publishing House, Anand
2. Railway Engineering by M.M. Aggarwal
3. Airport Engineering by Harnjeff, McGraw Hill Inter. Publisher

Note:

1. In the semester examination, the examiner will set two questions from each unit (total 08 questions in all), covering the entire syllabus. The students will be required to attempt only 5 questions selecting at least one question from each unit.
2. The use of scientific calculator will be allowed in the examination. However, programmable calculator and cellular phone will not be allowed.





SYLLABUS: B Tech (CE)

Department: Civil Engineering – 6th Semester

Subject: Environmental Engineering – II (Theory)

Subject Code: CSE-312B

Detailed Content

Unit No.1 Sewerage system, Characterization of sewage

- Topic No.1 : Generation and Estimation of Community Sewage; Flow variations
- Topic No.2 : Storm Water flow; Alternate systems for sewage collection and conveyance
- Topic No.3 : Design of sewers
- Topic No.4 : Parameters for characterization; Sampling
- Topic No.5 : Testing and analysis of sewage
- Topic No.6 : Relative stability and population equivalent; BOD and BOD kinetics

Unit No.2 Treatment of sewage

- Topic No.7 : Effluents standards; Basic principles of sewage treatment
- Topic No.8 : Introduction to unit operations and processes - primary treatment units such as screening
- Topic No.9 : Grit chamber, and Sedimentation tanks
- Topic No.10: Secondary treatment units such as different types of aerobic suspended and attached growth systems
- Topic No.11: Tertiary treatment Sludge Handling and disposal – thickening, stabilization, dewatering, drying and disposal

Unit No.3 Sewage treatment units design, Treated effluent disposal

- Topic No.12: ASP
- Topic No.13: TF, stabilization ponds
- Topic No.14: Disposal into surface water bodies; Reuse for irrigation and aqua-culturing
- Topic No.15: Land disposal; Disposal through injection into groundwater
- Topic No.16: Indian standards for disposal of effluent

Unit No.4 Low cost sanitation systems, Plumbing

- Topic No.17: Imhoff tanks
- Topic No.18: Septic tank, stabilization ponds
- Topic No.19: Oxidation ponds
- Topic No.20: Constructed wetland systems
- Topic No.21: Sewage pumping and pumping stations
- Topic No.22: Sewer connections for houses and buildings
- Topic No.23: Sewer appurtenances
- Topic No.24: Construction and Maintenance of sewers

Study Scheme				Evaluation Scheme			Total Marks
Lectures per week				Internal Assessment	External Assessment (Examination)		
L	T	P	Credits	Max. Marks	Max. Marks	Exam Duration	
3	1	-	4	25	75	3 hours	100

TEXT BOOKS:

1. Introduction to Environmental Engg. by M.L Davis and Corn Well , McGraw Hill
2. Introduction to Environmental Engg. & Science , G.M Masters, Prentice Hall of India
3. Environmental Engineering Vol. II S.K. Garg, Khanna Publishers New-Delhi.
4. Environmental Impact Assessment, R K Jain, John Wiley Publication
5. Introduction to Environmental Engg. by M.L Davis and Corn Well , McGraw Hill

REFERENCE BOOKS:

1. Wastewater Engineering, Met Calf & Eddy, McGraw Hill.
2. Manual on sewerage and sewage treatment, Ministry of Urban Development, New Delhi
3. Water Supply and Sewerage, McGhee, McGraw Hill.



SYLLABUS: B Tech (CE)

Department: Civil Engineering – 6th Semester

Subject: Reinforced Concrete Design Lab - II

Subject Code: CSE-314B

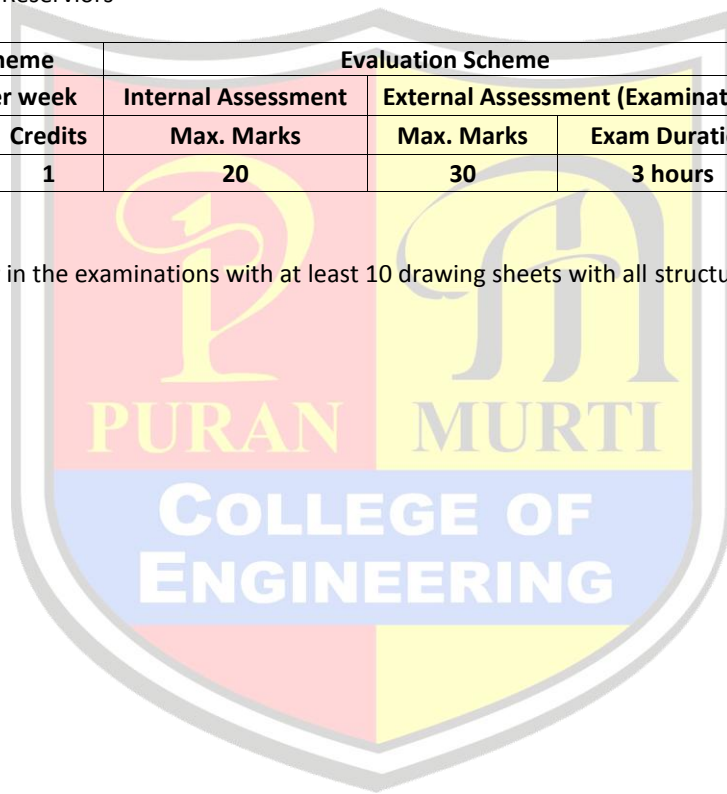
Detailed Content

Structural Drawings through AUTOCAD of the followings:

1. Isolated footings
2. Combined footings
3. Beams Curved in Plan
4. Cantilever Retaining Walls
5. Counterfort Retaining walls
6. Conical and Spherical Domes
7. Underground and Surface Water Tanks
8. Over Head Service Reserviors

Study Scheme				Evaluation Scheme			Total Marks
Lectures per week				Internal Assessment	External Assessment (Examination)		
L	T	P	Credits	Max. Marks	Max. Marks	Exam Duration	
-	-	2	1	20	30	3 hours	50

Students are required to appear in the examinations with at least 10 drawing sheets with all structural details





SYLLABUS: B Tech (CE)

Department: Civil Engineering – 6th Semester

Subject: Foundation Engineering Lab

Subject Code: CSE-316B

Detailed Content

List of Experiments:

1. Determination of Relative density of coarse grained soils in dry and saturated conditions.
2. Determination of shear strength at different densities by Direct shear test.
3. Determination of MDD and OMC at different compactive effort by compaction test.
4. Determination of Unconfined compressive strength at different compactive effort.
5. Determination of compressibility characteristics of fine grained soils by Consolidation test.
6. Determination of bearing capacity by Standard Penetration test.
7. Determination of shear strength of dry sands by Tri-axial shear test.
8. Determination of shear strength of saturated sands by Tri-axial test.
9. Determination of bearing capacity by Plate load test.
10. Determination of bearing capacity by Cone Penetration test.
11. Determination of bearing capacity by Pressuremeter test.

Study Scheme				Evaluation Scheme			Total Marks
Lectures per week				Internal Assessment	External Assessment (Examination)		
L	T	P	Credits	Max. Marks	Max. Marks	Exam Duration	
-	-	2	1	20	30	3 hours	

Note:

Ten experiments are to be performed in the Semester taking atleast seven experiments from the above list. Remaining three experiments should be performed as designed & set by the concerned Institution as per the scope of the syllabus.



SYLLABUS: B Tech (CE)

Department: Civil Engineering – 6th Semester

Subject: Environmental Engineering II Lab

Subject Code: CSE-318B

Detailed Content

List of Experiments:

1. Flow measurement in open channels using V and rectangular notches
2. Determination of DO.
3. Determination of BOD.
4. Determination of COD.
5. Determination of Sulphates.
6. Determination of Nitrite and Nitrate nitrogen.
7. Determination of Ammonical and Total Kjeldhal Nitrogen.
8. Determination of phosphorus (total and available).
9. Determination of SVI (including MLSS and MLVSS estimations).
10. Settling column test for primary settling tank design.
11. Settling column test for secondary setting tank design

Study Scheme				Evaluation Scheme			Total Marks
Lectures per week				Internal Assessment	External Assessment (Examination)		
L	T	P	Credits	Max. Marks	Max. Marks	Exam Duration	
-	-	2	1	20	30	3 hours	50

Note:

Ten experiments are to be performed in the Semester taking atleast seven experiments from the above list. Remaining three experiments should be performed as designed & set by the concerned Institution as per the scope of the syllabus.



SYLLABUS: B Tech (CE)

Department: Civil Engineering – 6th Semester

Subject: Report Writing Skills

Subject Code: HUM-302B

Detailed Content

Unit No.1 Report Writing

Reports: meaning, their importance and types, Structure of reports, Formats of reports, Use of illustrations

Unit No.2 Writing of Business and Technical Reports:

Preliminary steps and procedure of writing report, writing various types of reports on technical, business related topics

Study Scheme				Evaluation Scheme			Total Marks
Lectures per week				Internal Assessment	External Assessment (Examination)		
L	T	P	Credits	Max. Marks	Max. Marks	Exam Duration	
1	-	-	1	25	50	2 hours	75

RECOMMENDED READING:

1. Borowick, Jerome. N. *Technical Communication and its Applications*. New Delhi: PHI, 2000
2. Guffey, Mary Ellen. *Business Communication: Process & Product*. USA: South western College Publishing, 2000.
3. Kumar, Sanjay and Pushp Lata. *Communication Skills*. Delhi: OUP, 2011

SCHEME OF END SEMESTER EXAMINATION (MAJOR TEST) AND INSTRUCTIONS FOR THE EXAMINER:

1. The duration of the exam will be 2 hours.
2. The Question Paper for this theory course shall have three questions in all covering both the units. All will be compulsory with internal choice.
3. Question no. 1 will be of 10 marks. The question may have two/three parts with enough internal choice, covering various components of both the Units.
4. Question no 2 with internal choice will be of 10 marks covering contents of the Unit I. It will be theoretical in nature.
5. Question no 3 will have two parts of 15 marks each. The student will be asked to write reports on business and technical subject/ issue covering contents of Unit II. The emphasis would be on testing the actual report writing on a given business and technical situation/ subject in letter format.



SYLLABUS: B Tech (CE)

Department: Civil Engineering – 6th Semester

Subject: Oral Presentation Skills

Subject Code: HUM-304B

Detailed Content

OBJECTIVE:

To enable students to develop their speaking skills with professional proficiency

Oral Presentations:

Group Discussion; Mock interviews

Note for the Teacher:

The teacher concerned, by devising her/his method, must preview and review the student's spoken proficiency at the beginning and end of the semester respectively to find the efficacy of the course and degree of improvement in the student.

RECOMMENDED READING:

1. Konar, Nira. *English Language Laboratories: A Comprehensive Manual*. Delhi: PHI, 2011
2. Kumar, Sanjay and Pushp Lata. *Communication Skills*. Delhi: OUP, 2011

SCHEME OF END SEMESTER EXAMINATION (Practical)

An external Practical exam of 30 marks of 2 hour duration for the course will be conducted by an external examiner appointed by the competent authority of the University's.

Study Scheme				Evaluation Scheme			Total Marks
Lectures per week				Internal Assessment	External Assessment (Examination)		
L	T	P	Credits	Max. Marks	Max. Marks	Exam Duration	
-	-	2	1	20	30	2 hours	

NOTE:

Students will be tested for their oral communication competence making them participate in Group discussion, mock situations for interview. Students may also be evaluated through a viva conducted by an external examiner.



SYLLABUS: B Tech (CE)

Department: Civil Engineering – 6th Semester

Subject: General Proficiency & Ethics

Subject Code: GPCE-302B

Detailed Content

The purpose of this course is to inculcate a sense of professionalism in a student along with personality development in terms of quality such as receiving, responding, temperament, attitude and outlook. The student efforts will be evaluated on the basis of his/ her performance / achievements in different walks of life.

A Faculty Counselor will be attached to a group of students which will remain associated with him /her during the entire period of the degree program in the University. Each faculty member will serve as a faculty counselor. They will act like a local guardian for the students associated with him / her and will help them in terms of career guidance, personal difficulties.

B. The student will present a written report before the committee with following in view:

The student will present before the committee his/her achievements during the current academic session in the form of a written report highlighting followings:

- I. Academic Performance ----- (8 Marks)
- II. Extra Curricular Activities / Community Service, Hostel Activities (8 Marks)
- III Technical Activities / Industrial, Educational tour (14 Marks)
- IV Sports/games (15 Marks)
- V Moral values & Ethics

NOTE:

Report submitted by the students should be typed on both sides of the paper.

D. A student will support his/her achievement and verbal & communicative skill through presentation before the committee. (30 Marks)

C. Moral values & Ethics

Syllabus - A few topics from the below mentioned books

1. R.R.Gaur, R. Sangal and G.P. Bagaria, " Bagaria, " A foundation course in Human Values and Professional Ethics", Pub: Excel Books, New Delhi-110028.
2. M. Govindrajan, S Natrajan & V.S. Senthil Kumar, " Engineering Ethics (including Human Values)" Eastern Economy Edition, Prentics Hall of India Ltd.

A minor test/Quiz will be conducted during the semester end. It will be the duty of the concerned teacher assigned to teach Moral values & Ethics to submit the awards to respective chairman of the department / Director/Principal.

The evaluation of this course will be made by the following Committee.

University Departments:

1. 1 Chairperson of the Department Chairman
2. 2 Senior Most Faculty Counselor Member
3. 3 Vice- Chancellor's Nominee Member

Affiliated Colleges:

1. 1 Director/Principal Chairman
2. 2 Head of the Department/Sr. Faculty Member
3. 3 External Examiner to be appointed by the University Member



PM

COLLEGE OF ENGINEERING

A Unit of Puran Murti Educational Society
Approved by AICTE, Ministry of HRD, Govt. of India,
Affiliated to Deenbandhu Chhotu Ram University of Science & Technology

Study Scheme				Evaluation Scheme			Total Marks
Lectures per week				Internal Assessment	External Assessment (Examination)		
L	T	P	Credits	Max. Marks	Max. Marks	Exam Duration	
1	-	-	2	75	-	-	75

Note:

Remuneration will be paid to the external examiner only (at par with the other practical examinations).

