

M A R C H	28	Pre stressed Concrete-Basic principles	SESSIONA L-I	
	29	classification of pre-stressed members		
	30	various pre stressing systems		
	31	losses in pre-stress		
	32	initial and final stress conditions		
	33	analysis and design of sections for flexure and shear		
	34	load balancing concept,		
	35	IS Specifications End blocks-An lyses of stresses		
	36	Magnel's method		
	37	Guyon's method		ASSIGNMENT-3
	38	Bursting and spelling stresses		
	39	Design examples.		
	40	Building Frames-Introduction		
	41	design and detailing for ductility	SEMINAR- III	
	42	Loads, Analysis for vertical and lateral loads		
	43	Torsion in buildings		TEST-V
44	Ductibility of beams		TEST-VI	
45	design examples			
SECTION-D				
A P R I L	46	Yield Line Theory-Basic assumptions.	SESSIONAL-II	
	47	Methods of analysis.		
	48	Yield line patterns and failure.		
	49	Mechanisms.		ASSIGNMENT-4
	50	Analysis of one way and two way rectangular and non-rectangular slabs.		
	51	corner steel in square slabs		
	52	design examples		TEST-VII
			P.U.T	

Lesson planning for the semester started w.e.f. Jan'18-June'18

Name of Institute : Aravali College of Engineering and Management

Name of teacher with designation : Nishant Sharma (Asst. Proff. CE)

Department : Civil Engineering 6th Semester

Subject : ENGINEERING GEOLOGY (CE-312-F)

Month	Class	Topic/Chapter covered	Academic activity	Test/Assignment
Section A				
Jan	1	Definition, object, scope of geology		
Jan	2	Sub division of geology, geology around us.		
Jan	3	The interior of the earth.		
Jan	4	The interior of the earth.		
Jan	5	Importance of geology in Civil Engineering projects.		
Jan	6	Importance of geology in Civil Engineering projects.		
Jan	7	The external and internal geological forces causing changes		
Jan	8	Weathering and erosion of the surface of the earth.		
Feb	9	Weathering and erosion of the surface of the earth.		
Feb	10	Geological work of ice, water and winds.		
Feb	11	Soil profile and its importance		Assignment of section A with deadline of 1 week
Feb	12	Earthquakes and volcanoes.		Test
Section B				
Feb	13	Definition of mineral and rocks		
Feb	14	Classification of important rock forming minerals		
Feb	15	Simple description based on physical properties of minerals.	PPT	
Feb	16	Simple description based on physical properties of minerals.		
Feb	17	Rocks of earth surface, classification of rocks.		
Feb	18	Mineral composition, Textures, structure and origin of Igneous, Sedimentary and Metamorphic rocks.		
Feb	19	Mineral composition, Textures, structure and origin of Igneous, Sedimentary and Metamorphic rocks.		

Feb	20	Aims and principles of stratigraphy.		
Feb	21	Standard geological/ stratigraphical time scale with its sub division and a short description based on Engineering uses of formation of India.		
Feb	22	Standard geological/ stratigraphical time scale with its sub division and a short description based on Engineering uses of formation of India.	PPT	Assignment of section B with deadline of 1 week
March	23	Standard geological/ stratigraphical time scale with its sub division and a short description based on Engineering uses of formation of India.		Test
		Section C		
March	24	Forms and structures of rocks.		
March	25	Bedding plane and outcrops Dip and Strike.		
March	26	Bedding plane and outcrops Dip and Strike.		
March	27	Elementary ideas about fold, fault, joint and unconformity and recognition on outcrops.	Sessional 1	
March	28	Elementary ideas about fold, fault, joint and unconformity and recognition on outcrops.		
March	29	Importance of geological structures in Civil Engineering projects.		
March	30	Ground water geology- Hydrogeology		
March	31	Aquifer, water table, springs and Artesian well, aquifers, ground water in engineering projects.		
March	32	Aquifers, water table, springs and Artesian well, aquifers, ground water in engineering projects.	PPT	
March	33	Artificial recharge of ground water, Elementary ideas of geological investigations.		
March	34	Artificial recharge of ground water, Elementary ideas of geological investigations.		
March	35	Remote sensing techniques for geological and hydrological survey and investigation.		
April	36	Remote sensing techniques for geological and hydrological survey and Investigation.		Assignment of section C with deadline of 1 week
April	37	Uses of geological maps and interpretation of data, geological reports.		Test
		Section D		
April	38	Applied geology-Physio graphic division in India, Suitability and stability of foundation sites and abutments.		
April	39	Applied geology-Physio graphic division in India, Suitability and stability of foundation sites and abutments.		
April	40	Geological conditions and their influence on the selection, location, and types.		
April	41	Geological conditions and their influence on the selection, location, and types.		

April	42	Design of dams, reservoirs, tunnels, highways, bridges etc.	Sessional 2	
April	43	Design of dams, reservoirs, tunnels, highways, bridges etc.		
April	44	Landslides and Hill slope stability.		
April	45	Improvement of foundation rocks,		
April	46	Precaution and treatment against faults, joints and ground water	PPT	
April	47	Precaution and treatment against faults, joints and ground water		
April	48	Retaining walls and other precautions.		
April	49	Geology and Environment of earth.		Assignment of section D with deadline of 1 week
April	50	Geology and Environment of earth.		Test

Lesson Planning for the semester started w.r.f Jan'18-June'18

Name of Institute : Aravali College of Engineering and Management
 Name of teacher with designation : Abhisar Malik (Asst. Proff, CE)
 Department : Civil Engineering 6th Semester
 Subject : **GEOTECHNOLOGY (CE-306-F)**

Month	Class	Topic/Chapter covered	Academic activity	Test/Assignment
Section A				
Jan	1	Causes of failure, factors of safety, stability analysis of slopes-total stress analysis, effective stress analysis		
Jan	2	stability of infinite slopes types of failures of finite slopes		
Jan	3	analysis of finite slopes-mass procedure,		
Jan	4	method of slices, effect of pore pressure.		
Jan	5	Taylor's stability number		
Jan	6	Fellinius method to locate centre of most critical slip circle		
Jan	7	friction circle method		
Jan	8	slope stability of earth dam during steady seepage	Presentation on slopes	
Feb	9	during sudden draw down and during and at the end of construction.		Assignment of section A with deadline of 1 week
Feb	10	Numericals on friction circle		
Feb	11	Numericals on taylor stability		
Feb	12	Test		Test
Section B				
Feb	13	Depth of unsupported vertical cut		
Feb	14	sheeting and bracing for deep excavation & bracing.		
Feb	15	movements associated with sheeting		
Feb	16	modes of failure of braced cuts		
Feb	17	modes of failure of braced cuts		
Feb	18	pressure distribution behind sheeting		
Feb	19	pressure distribution behind sheeting	Presentation on bracing	
Feb	20	Introduction, types of cofferdams		
Feb	21	design and lateral stability of braced cofferdams		Test

Feb	22	design data for Cellular cofferdams		
Feb	23	stability analysis of cellular cofferdams on soil and rock		
Feb	24	inter-lock stresses		
		Section C	Sessional 1	
March	25	Purpose of sheet piles, cantilever sheet piles		
March	26	depth of embedment in granular soils-rigorous		
March	27	Method Simplified of cantilever sheet pile		
March	28	penetrating clay, limiting height of wall.		
March	29	Methods of design, free earth support method in cohesionless and cohesive soils,		Assignment of section B & C with deadline of 1 week
March	30	fixed earth support method in cohesionless soils-Slum's equivalent beam method.		Test
		Section D		
March	31	Soil improvement, shallow compaction, mechanical treatment, use of admixtures, lime stabilization		
March	32	cement stabilization, lime fly ash stabilization, dynamic compaction and consolidation, Bituminous	Presentation on stabilization	
March	33	stabilization, chemical stabilization, pre-compression, lime pile and column, stone column, grouting		
March	34	reinforced earth.		
			Sessional 2	
April	35	Terminology, characteristics elements of a vibratory systems,		
April	36	analysis of vibratory motions of a single degree freedom system-undamped free vibrations		
April	37	undamped forced vibrations, criteria for satisfactory action of a machine foundation		Test
April	38	Degrees of a freedom of a block foundation		
April	39	Barken's soil spring constant		
April	40	Barken's method of a determining natural frequency of a block foundation subjected to vertical oscillations		
April	41	Barken's method of a determining natural frequency of a block foundation subjected to vertical oscillations		Assignment of section D with deadline of 1 week
April	42	Revision		
April	43	Revision		
April	44	Revision		Test

Lesson planning for the semester started w.e.f. Jan'18-June'18

Name of Institute : Aravali College of Engineering and Management
 Name of teacher with designation : Nishant Sharma (Asst. Proff. CE)
 Department : Civil Engineering 6th Semester
 Subject : IRRIGATION ENGINEERING - I (CE-304-F)

Month	Class	Topic/Chapter covered	Academic activity	Test/Assignment
Section A				
Jan	1	Introduction of Regulation works, Canal lulls-necessity and location, development of falls.		
Jan	2	Design of cistern clement, roughening devices.		
Jan	3	Principal of design of Sarda type fall.		
Jan	4	Numerical.		
Jan	5	Numerical.		
Jan	6	Design of straight Glacis fall.		
Jan	7	Numerical.		
Jan	8	Numerical.		
Feb	9	Off-take alignment, cross regulator and distributor' head regulators.		
Feb	10	Devices to control silt entry into the off-taking channel and silt ejector	PPT on Canals	Assignment of section A with deadline of 1 week
Feb	11	Canal escapes, types of escapes.		Test
Section B				
Feb	12	Cross drainage works: Classification and their selection		
Feb	13	Fundamentals of hydraulic design aspects of:-		
Feb	14	Aqueducts, syphon aqueducts		
Feb	15	Super passage, canal syphon and levelcrossing		
Feb	16	Design of transitions.		
Feb	17	Design of transitions.		
Feb	18	Numerical		
Feb	19	Diversion canal headworks		
Feb	20	Varies components and their functions		
Feb	21	Layout plan, selection of site for diversion headworks	PPT on cross drainage	
March	22	Bligh's creep theory		
	23	Khosla's method of independent variables		
	24	Khosla's method of independent variables		
	25	Use of Khosla's curves		

	26	Various corrections		Assignment of section B with deadline of 1 week
	27	Silt excluders		Test
		Section C		
	28	Storage Headworks		
March	29	Types of dams, selection of a site		
March	30	Gravity dam-two dimensional design		
March	31	Forces acting, stability criterion, elementary profile of a dam, cutoffs and drainage galleries		
March	32	Forces acting, stability criterion, elementary profile of a dam, cutoffs and drainage galleries	Sessional 1	
March	33	Arch dams-constant angle and constant radius arch dam		
March	34	Simple design and sketches, most economical angle		
March	35	Simple design and sketches, most economical angle		
March	36	Earth dam, design principles, seepage through earth dams, seepage line, control of seepage, design of filters	PPT on Earth Dam	
March	37	Earth dam, design principles, seepage through earth dams, seepage line, control of seepage, design of filters		Assignment of section C with deadline of 1 week
March	38	Earth dam, design principles, seepage through earth dams, seepage line, control of seepage, design of filters		Test
		Section D		
April	39	Spillways and Energy Dissipations		
April	40	Essential requirements of spillway and spillway's capacity		
April	41	Types of spillways and their suitability		
April	42	Ogee spillways, chute, side channel, shaft and syphon spillways		
April	43	Ogee spillways, chute, side channel, shaft and syphon spillways	Sessional 2	
April	44	Energy dissipation below spillways		
April	45	Energy dissipation below spillways		
April	46	stilling basins	PPT on Spillways	
April	47	USBR and I.S. Stilling Basins		Assignment of section D with deadline of 1 week
April	48	USBR and I.S. Stilling Basins		Test

Lesson Planning for the semester started w.r.f Jan'18 to June'18

Name of Institute : ACEM , FARIDABAD
 Name of teacher with designation : PANKAJ KAUSHIK ASSISTANT PROFESSOR
 Department : CIVIL ENGINEERING, 6TH SEM
 Subject : SEWAGE AND SEWAGE TREATMENT(CE-308-F)

Month	Class	Topic/Chapter covered	Academic activity	Test/Assignment
Section A				
J A N U A R Y	1	Importance of sanitation, Systems of sewerage		
	2	Separate, combined and partially separate. Quantity of sanitary sewage and variations.		
	3	Shapes of sewer- circular and egg shaped. Design of sewers,	Engg. Design of circulation pipes	
	4	self cleansing Velocity and slopes		
	5	Construction and testing of sewer lines. Sewer materials, joints and appurtenances.		Test 1
	6	Sewage collection from houses and buildings,		
	7	general principal for design of a sanitary plumbing system		Assignment 1
	8	Traps function and types, System of plumbing		
	09	testing of house sewer, sanitary fittings and other accessories,		
	10	ventilation of house drainage, waste water recycling in building		
Section-B				
F	11	Quality parameters- BOD, COD, Solids, D.O., Oil & Grease, tests on quality parameters	Practical calculation of BOD at laboratories	Test 2

E	12	Sewage disposal, type relative advantage and disadvantage of various sewage disposal systems.		
B	13	Disposal effluents into inland surface sources and on land. Bangalore method and Indore		Assignment 2
R	14	Disposal of sewage by dilution -		
U	15	Digestion and disposal of primary and secondary sludge – Moisture content		
R	16	sludge digestion process,,		
	17	sludge digestion tanks, disposal of digested sludge		
	18	Objectives of sewage Treatment,		
Section-C				
M A R C H 2 0 1 8	19	Skimming tanks, Theory and design aspects of sedimentation, coagulation,		
	20	Secondary treatment- Biological Filtration – Trickling Filter,		Test 3
	21	Humus tank,		
	22	Stabilization pond, oxidation pond		Assignment 3
	23	Oxidation ditches, aeration lagoons, anaerobic stabilization units -		
	24	Sludge Digestion UASB process sequence and efficiencies of conventional treatment units		
Section-D				
A P R I L 2	25	Noise Pollution- Definition and introduction,		
	26	level of noise		
	27	Air pollution –Definition of air pollution, Effects of air pollution,	Air pollution control activity and its measurement	Test 4
	28	Dispersion of air pollution in atmosphere,		
	29	Effect of Noise,		Assignment 4

0 1 8		characteristics of sound and it's measurement		
	30	Dispersion models and equations, Air pollution controls.		
	31	noise rating system and standards, source of noise their levels and controls	Noise pollution calculation in the lab.	
	32	merit and demerits of coagulation		
	33	Self-purification of streams. Sewage disposal by irrigation (Sewage treatment).		
	34	High rate Trickling Filter advantage and disadvantages, miscellaneous type of filter		Test 5
	35	Process Design of a complete sewage treatment plant, Examples	Composting plant visit.	Assignment 5
	36	classification of treatment process, Preliminary treatment -screening and grit removal units		Report submission of the plant visit by PPT.
	37	septic tank and Inhoff tank		
	38	activated sludge process & its modifications, aeration tanks, secondary sedimentation tanks		

Lesson Planning for the semester started w.e.f. Jan'18 to June'18

Name of Institute : ACEM FARIDABD
 Name of teacher with designation : ER. DK JAISWAL ASSISTANT PROFESSOR
 Department : CIVIL ENGINEERING, 6th sem
 SUBJECT : TRANSPORTATION ENGINEERING-II (CE-310-F)

Month	Class	Topic/Chapter covered	Academic activity	Test/Assignment
		UNIT- 1		
JANUARY	1	Introduction And Types of pavements. Flexible and rigid pavements		
	2	Components of a pavement and their functions		
	3	Factors affecting design of pavements.		
	4	Design of thickness of a flexible pavement by Group Index method,		
	5	Design of thickness of a flexible pavement by Group Index method,		
	6	Design of thickness of a flexible pavement by CBR method,		
	7	Design of thickness of a flexible pavement by CBR method,	Presentation on Flexible pavement	
	9	Triaxial method		
	10	Burmister's method.		
		UNIT- 2		TEST
	11	Introduction to Design of Rigid Pavements Westergaard's theory		
	12	Critical locations of loading, load and temperature stresses		
	13	Critical combination of stresses		
	14	IRC guidelines for determination of thickness of a rigid pavement.		
JANUARY	15	IRC guidelines for determination of thickness of a rigid pavement.		
	16	Joints: requirements, types, patterns.		
	17	Spacing of expansion and contraction joints. Functions of dowel and tie bars.	Presentation on Rigid pavement	
	18	Test-1		
		UNIT -3		
FEBRUARY	19	Brief introduction to earthwork machinery: shovel, hoe, clamshell, dragline, bulldozers		
	20	Principles of field compaction of subgrade. Compacting equipments		
	21	Granular roads. Construction steps of WBM		
	22	WMM. Construction of cement concrete		

		pavements		
	23	Basic concepts of the following: soil stabilized roads, use of geo-synthetics		
	24	reinforced cement concrete pavements, prestress concrete pavements, roller compacted concrete pavements and fibre reinforced concrete pavements.		
		UNIT- 4		
	25	Various types of bituminous constructions		
	26	Prime coat, tack coat, seal coat and surface dressing.		
FEBRUARY	27	Construction of BUSG, Premix carpet		
	28	BM, DBM and AC. Brief coverage of machinery for construction of bituminous roads		
	29	bitumen boiler, sprayer, pressure distributor		
	30	Hot-mix plant, cold mix Plant tipper trucks, mechanical paver or finisher, rollers. Mastic asphalt. Introduction to various IRC and MOST specifications.	SESSIONAL -I	TEST
	31	Test 2		
		UNIT 5		
MARCH	32	Highway Maintenance Pavement failures. Maintenance operations		
		Maintenance of WBM, bituminous surfaces and cement concrete pavements,		
MARCH	33	Pavement evaluation, Benkelman beam.		
	34	Introduction to various types of overlays	Presentation on Highway maintenance	
		Unit-6		
	35	Highway Drainage and Hill Roads Surface drainage: types, brief design.		
	36	Types of sub-surface drainage. Special characteristics of hill roads		
	37	Geometrics, hair pin bends, construction of hill roads, drainage of hill roads,		
	38	Maintenance problems of hill roads		
		Unit-7		
APRIL	39	Highway Economics and Finance Need of economic evaluation. Highway user benefits and costs		TEST
	40	Methods of economic evaluation: benefit cost ratio method		
	41	Net present value method	Presentation on Highway economics	

	42	Internal rate of return method		
	43	Comparison, Highway finance.		
		Unit -8		
	44	Tunnels Sections of tunnels: advantages, limitations and suitability of each section		
	45	Shaft. Pilot tunnel. Driving tunnel in rocks: sequence of construction operations		
	46	Full-face method, heading and bench method	Presentation on Tunnels	
	47	Drift method. Driving tunnels in soft ground		
	48	sequence of construction operations, needle beam method		
APRIL	49	Shield tunneling, compressed air tunneling		
		Test3	SESSIONAL -II	