

Lesson Plan

Name of the faculty : Hemant Sharma
 Discipline : Civil Engg.
 Semester : 6th Semester
 Subject : Quantity Surveying & Valuation
 Lesson Plan Duration : 15 weeks (from January, 2019 to April, 2019)

Work Load (Lecture) per week (in hours): Lectures-05

Week	Lecture Day	Theory Topic (Including assignment/test)
1 st	1 st	Introduction to quantity surveying and its importance
	2 nd	Duties of quantity surveyor
	3 rd	Types of estimates, Preliminary estimates- Plinth area estimate
	4 th	Cubic rate estimate, Estimate per unit base
	5 th	Detailed estimate.
2 nd	6 th	Stages of preparation- Details of measurement and calculation of quantities and abstract
	7 th	Measurements- Units of measurements for various items of work as per BIS:1200
	8 th	Rules of measurements, Different methods of taking out quantities – Centre line method
	9 th	Centre line method
3 rd	10 th	Long wall and Short wall method
	11 th	Preparation of Detailed & Abstract Estimates from Drawings for: A small residential building with a flat roof.
	12 th	A small residential building with a pitched roof.
	13 th	Two rooms with W.C., Bath
	14 th	Two rooms with kitchen
4 th	15 th	Two rooms with verandah
	16 th	Earth work for unlined channel (with numerical problems)
	17 th	Numerical problem on Earthwork for unlined channel
	18 th	WBM road
	19 th	Numerical Problem on WBM road
5 th	20 th	Pre mix carpeting
	21 st	Numerical Problem on Pre mix carpeting
	22 nd	Assignment, Problem solving
	23 rd	Earth Work for Plain roads (With Numerical Problems)

	24 th	Earthwork for hill roads (With Numerical Problems)
	25 th	Numerical problems Earthwork plain, hill road

Week	Lecture Day	Theory Topic (Including assignment/test)
6 th	26 th	RCC work in beams (with numerical problems)
	27 th	RCC work in Slab (with numerical problems)
	28 th	RCC work in column (with numerical problems)
	29 th	RCC work in Lintel & foundations (with numerical problems)
	30 th	RCC work in foundations (with numerical problems)
	7 th	31 st
32 nd		Users Septic Tank – 50 users
33 rd		Numerical Problem on 10 & 50 users tank
34 th		Cement Mortar of different proportion with numerical problems
35 th		Cement Concrete of different proportion with numerical problems
8 th	36 th	Brick/Stone masonry in cement mortar, Plastering and pointing
	37 th	White washing, painting, RCC work in slab
	38 th	RCC work in beams (with numerical problems both slab & beam)
	39 th	Analysis of rates:- Steps involved in the analysis of rates. Requirement of material
	40 th	Labour, sundries, contractor's profit and overheads
9 th	41 st	Analysis of rates for finished items when data regarding labour, rates of material and labour is given: Earth work excavation in hard/ordinary soil
	42 nd	Filling with a concept of lead and lift, RCC in roof slab/beam
	43 rd	RCC in lintel/columns, Brick masonry in cement mortar, cement plaster
	44 th	White washing, painting, Stone masonry in cement mortar,
	45 th	Running and maintenance cost of construction equipment
10 th	46 th	Contractorship:- Meaning of Contractorship, Qualities of a good contractor and their qualifications.
	47 th	Essentials of contractor, Types of contractors, their advantages, disadvantages and suitability, system of payment
	48 th	Single & two cover bids, tender, tender form & documents, tender notice, submission of tender
	49 th	Deposit of earnest money, security deposit, retention money
	50 th	Maintenance period, Classification and types of contracting firms/construction companies.
11 th	51 st	Preparation of tender document based on common schedule rate (CSR):- Introduction to CSR and calculation of cost based on premium on CSR.
	52 nd	Exercise on writing detailed specifications of different types of building works from excavation to foundations.
	53 rd	Superstructure and finishing operation.
	54 th	Exercise on preparing tender documents for the following:- Earth work
	55 th	a) Construction of small house as per given drawing

Week	Lecture Day	Theory Topic (Including assignment/test)
12 th	56 th	b) RCC works
	57 th	c) Pointing, plastering, and flooring
	58 th	d) White washing
	59 th	e) Distemping and painting
	60 th	f) Wood work including polishing
	13 th	61 st
62 nd		h) False ceiling, aluminium(glazed) partitioning i) Tile flooring including base course
63 rd		j) Tile flooring including base course
64 th		k) Construction of WBM/Concrete roads Test
65 th		l) Revision
14 th	66 th	m) Exercise on preparation of comparative statements for item rate contract.
	67 th	n) Exercise on preparation of comparative statements for item rate contract.
	68 th	a) Valuation
	69 th	b) Purpose of valuation, Principles of valuation
	70 th	c) Definition of various terms related to valuation like depreciation, sinking fund
15 th	71 st	a) Salvage value and scrap value
	72 nd	Market value, fair rent, year's purchase etc.
	73 rd	b) Methods of valuation 1) Replacement cost method
	74 th	2) Rental return method
	75 th	Rental return, Replacement cost method (Numerical problems method)

Lesson Plan

Name of the faculty : Sh. Om Parkash Yadav

Discipline : Civil Engg.

Semester : 6th Semester

Subject : Construction Management & Accounts

Lesson Plan Duration : 15 weeks (from January, 2019 to April, 2019)

Work Load (Lecture) per week (in hours): Lectures-04

Week	Lecture Day	Theory Topic (Including assignment/test)
1 st	1 st	Significance of construction management, main objectives
	2 nd	Overview of the subject, Functions of construction managements
	3 rd	Classification of construction into light, heavy and industrial
	4 th	Stages in construction from conception to completion
2 nd	5 th	Construction team, functions and inter-relationship
	6 th	Importance of construction planning
	7 th	Pre tender stage planning, Contract stage planning
	8 th	Difference between pre tender stage and contract stage
3 rd	9 th	Scheduling of construction work by bar chart, Activity-Definition & identification
	10 th	Preparation of bar charts for simple construction work
	11 th	Preparation of labour, material schedules for small works
	12 th	Preparation of machinery and financial schedule for small works
4 th	13 th	Limitation of bar charts, Network techniques
	14 th	PERT & CPM, Difference between PERT & CPM
	15 th	Types of organisations, Line organisation and its characteristics
	16 th	Line and staff organisation and its characteristics
5 th	17 th	Functional organisation and its characteristics
	18 th	Principle of storing and stacking materials at site
	19 th	Location of equipment at site
	20 th	Preparation of actual job layout for a building , Organising labour at site

6 th	21 st	1 st sessional test
	22 nd	Condition of construction workers in India, Wages pay to workers
	23 rd	Provisions of Labour Welfare Fund Act 1936(As Amended)
	24 th	Provisions of Payment wages Act 1936(As Amended)
7 th	25 th	Provisions of minimum wages Act 1948
	26 th	Necessity of various labours Act
	27 th	Methods of recording progress of work, Analysis of progress
	28 th	Taking corrective actions keeping Head-office informed
8 th	29 th	Cost time optimization for simple Jobs- Direct & In direct cost, variation with time, cost optimization
	30 th	Need for inspection and quality control, Principles of inspection
	31 st	Inspection and quality control for earth work
	32 nd	Inspection and quality control for masonry
9 th	33 rd	Inspection and quality control for RCC
	34 th	Inspection and quality control for sanitary service
	35 th	Inspection and quality control for water supply services
	36 th	Accidents- Causes and Remedies, Safety measures for excavation works
10 th	37 th	Safety measures for drilling and blasting works
	38 th	Safety measures for scaffolding and ladders
	39 th	Safety measures for form work
	40 th	Safety measures for demolitions
11 th	41 st	Safety campaign , Safety devices and their use
	42 nd	2 nd sessional test, assignment
	43 rd	Introduction of public works accounts, technical sanction
	44 th	Administrative approval, allotment of fund, re appropriation of funds bill
12 th	45 th	Contractor ledger,M.B.
	46 th	Running and final bills, BOQ
	47 th	Completion certificate, hand receipt acquittance roll
	48 th	Muster Roll Labour, Casual labour Roll

13 th	49 th	Duties and responsibilities Different cadres
	50 th	Stores, Returns, Stock, Misc. P.W. advances
	51 st	T&P-verification, survey report, Expenditure and revenue head, deposit head
	52 nd	Cash, Cash Book precautions, Impressed account, temporary advance
14 th	53 rd	3 rd sessional test, Assignment
	54 th	Treasury challan, Preparation of final bills
	55 th	Practice of final bills
	56 th	Preparation of accounts register
15 th	57 th	Preparation of stock register
	58 th	Preparation of various accounts bills formats
	59 th	Muster Roll and their uses
	60 th	Problem solving

Lesson Plan

Name of the faculty : Neelam
 Discipline : Civil Engg.
 Semester : 6th Semester
 Subject : Railways, Bridges and Tunnels
 Lesson Plan Duration : 15 weeks (from January, 2019 to April, 2019)
 Work Load (Lecture) per week (in hours): Lectures-04

Week	Lecture	Theory
	Day	Topic (Including Assignment / Test)
1 st	1	Introduction to Indian Railways
	2	Railway Surveys, Factors influencing the railway route
	3	Brief description of various types of railway survey
	4	Classification of permanent way, its component parts, Rail gauge definition, types, practice in India
2 nd	5	Revision of previous topics
	6	Rails and types of rails
	7	Rail Fastenings
	8	Rail joints, types of rail joints, Fastenings for Rails

3 rd	9	Fish plates and bearing plates
	10	Revision of previous topics
	11	Assignment
	12	Sleepers definition, Function of sleepers
4 th	13	Types of Sleepers
	14	Requirements of an ideal material for sleepers
	15	Revisions of previous topics
	16	Definition of ballast, Function of ballast
5 th	17	Test
	18	Requirement of an ideal material for ballast
	19	Revision of previous topics
	20	Assignment, Crossings and signalings
6 th	21	Brief Description regarding diff. Types of crossing/signalings
	22	Revision of previous topics
	23	Maintenance of track definition
	24	Necessity maintenance of track, Inspection of soil, track and fixtures

7 th	25	Maintenance and boxing of ballast maintenance gauge
	26	Revision of previous topics
	27	Earth work and drainage definition
	28	Features of rail road, bed level, width of formation, Side slopes, drains method of construction
8 th	29	Requirement of drainage system
	30	Assignment
	31	Bridge Introduction
	32	Bridge function and component parts, Difference between a bridge and a culvert
9 th	33	Classification of bridge
	34	According to life-permanent and temporary
	35	According to deck level-Deck, through and semi-through
	36	According to material-timber, masonry, steel, RCC, pre-stressed, According to structural form
10 th	37	IRC Classification
	38	Revision of previous topics
	39	Test , Assignment
	40	Bridge foundation Introduction
11 th	41	Introduction to open foundation
	42	Pile foundation and its type
	43	Well Foundation and its type

	44	Revision of previous topics, Introduction of piers
12 th	45	Types of piers
	46	Abutments and wing walls definition
	47	Types of abutments
	48	Types of wing wall, Revision of previous topics
13 th	49	Bridge bearings, purpose of bearings
	50	Types of bearings
	51	Assignment
	52	Maintenance of bridge, Inspection of bridges
14 th	53	Routine maintenance
	54	Revision of previous topics
	55	Definition of tunnels
	56	Necessity of tunnels

15 th	57	Typical section of tunnel for a national Highway
	58	Cross-section of single and broad gauge railway track, Ventilation definition
	59	Necessity and methods of ventilation Drainage methods and lighting of tunnels
	60	Test

Lesson Plan

*Name of the Faculty : POOJA YADAV
 Discipline : CIVIL ENGINEERING
 Semester : 6 SEMESTER
 Subject : EARTHQUAKE RESISTANT BUILDING CONSTRUCTION
 Lesson Plan Duration : 15 weeks (from January, 2019 to April, 2019)

** Work Load (Lecture)Per Week (In Hours): Lecture-03

Week	Theory	
	Lecture Day	Topic (Including assignment/test)
1 st	1	General features of tectonic of seismic regions
	2	Seismic earthquake size
	3	Epicentre, seismograph
2 nd	4	classification of earthquake
	5	seismic zoning map of india
	6	static and dynamic loading
3 rd	7	fundamental period
	8	performance of building during earthquake
	9	mode of failure , out of plane failure
4 th	10	In plane failure
	11	diaphragm failure

	12	connection failure
5th	13	Non structural failure
	14	Revision
	15	Test
6th	16	Special construction method
	17	construction method tips while planning
	18	precautions observed while planning
7th	19	designing of earthquake resistant building
	20	construction of earthquake resistant building
	21	revision of this topic
8th	22	introduction to IS: 4326
	23	Introduction to IS:13828
	24	Introduction to IS:1893
9th	25	Introduction to IS: 154326
	26	Introduction to IS: 13920
	27	Seismic provision of strengthening
10th	28	seismic provision of retrofitting measures for traditionally built constructions
	29	brick structures
	30	test

11th	31	RCC structures
	32	Revision
	33	assignment
12th	34	definitions of provision of reinforcement detailing
	35	provision of reinforcement detailing in masonry
	36	basics of provision of RC construction
13th	37	provision of RC construction
	38	revision
	39	disaster management , disaster rescue
14th	40	psychology of resue, rescue workers
	41	rescue plan , rescue by steps, rescue equipment
	42	safety in resue operations , debris clearance
15th	43	casuality management
	44	test
	45	revisions of important topics

Lesson Plan

Name of the Faculty : POOJA VERMA
 Discipline : CIVIL ENGINEERING
 Semester : 6 SEMESTER
 Subject : Repair and maintenance of buildings
 Lesson Plan Duration : 15 weeks (from January, 2019 to April, 2019)

** Work Load (Lecture)Per Week (In Hours): Lecture-03

Week	Theory	
	Lecture Day	Topic (Including assignment/test)
1 st	1	Importance and significance of repair and maintenance of buildings
	2	meaning of maintenance
	3	Objectives of maintenance
2 nd	4	Factors influencing repair and maintenance
	5	Definition of deterioration
	6	Factors causing deterioration
3 rd	7	Factors causing deterioration with classification
	8	Human factors causing deterioration
	9	Chemical factors causing deterioration
4 th	10	Environmental conditions causing deterioration
	11	Miscellaneous factors

	12	Effects of various agencies of deterioration on various buildings materials bricks, timber, concrete, paints, metals, plastics
5th	13	Revision
	14	Test
	15	Systematic approach of investigation
6th	16	Procedure of investigation
	17	Sequence of detailed steps for diagnosis of building defects
	18	List non destructive and others tests on structural elements and materials to evaluate the conditios of the buildings and study of three most commonly used tests
7th	19	Define defects in building
	20	classification of defects
	21	Main causes of building defects in various buildings elements foundations basements, and DPC
8th	22	Main causes of building defects in various buildings elements Walls, colums and beams and roof and terraces
	23	Main causes of building defects in various buildings elements joinery decorative and protective finishes , services , defects caused by dampness
	24	Compatibility aspects of repair maintenance
9th	25	State application of Anti corrosion coatings , bonding aids
	26	Application of repair mortars, curing compounds, joint sealants
	27	Water proofing system for roofs, Protective Coatings
10th	28	Revision
	29	Test

	30	Preventive maintenance considerations
11th	31	Surface preparation techniques for repair
	32	Crack repair methods, Epoxy injection
	33	Grooving and sealing , Stitching Adding reinforcement and Grouting
12th	34	Flexible sealing by sealant
	35	Repair of surface defects of concrete bug holes, form tie holes, honey comb and larger voids
	36	Repair of Corrosion in RCC elements
13th	37	Material placement techniques with sketches
	38	Repair of DPC against Rising Dampness with physical and electrical methods
	39	Repair of DPC against Rising Dampness with Chemical methods
14th	40	Repair of walls
	41	Waterproofing of wet areas and roofs
	42	Repair of joints in buildings types of sealing joints
15th	43	Techniques for repair of joints and repair of overhead overhead and underground water tanks
	44	Revision
	45	Test