

<b>Name of Faculty: (theory) MR. GAURAV SHARMA</b>		
Discipline: - civil		
Semester:- <b>6th</b> (diploma)		
subject: - <b>CONSTRUCTION MANAGMENT AND ACCOUNTS</b>		
<b>week</b>	<b>theory</b>	
	<b>topic(including assignment/test)</b>	
1st	1st	Introduction:,Significance of construction management
	2nd	Main objectives of construction management and overview of the subject
	3rd	Functions of construction management, planning,organising, staffing
2nd	4th	directing, controlling and coordinating
	5th	Classification of construction into light, heavy and industrial construction
	6th	Stages in construction from conception to completion ,The construction team: owner, engineer, architect
3rd	7th	ontractors, their functions and inter-relationship ,Construction Planning
	8th	Importance of construction planning
	9th	Stages of construction planning ,Pre-tender stage - Contract stage
4th	10th	Scheduling construction works by bar charts
	11th	Definition of activity, identification of activities
	12th	Preparation of bar charts for simple construction work

5th	13th	Preparation of schedules for labour, materials, machinery and finances for small works
	14th	Limitations of bar charts Scheduling by network techniques
	15th	Introduction to network techniques;PERT and CPM,
6th	16th	differences between PERT and CPM terminology
	17th	Organization: Types of organizations
	18th	Line, line and staff, functional and their characteristics
7th	19th	Site Organization:Location of equipment
	20th	Principle of storing and stacking materials at site
	21st	Preparation of actual job layout for a building
8th	22nd	Organizing labour at site
	23rd	Construction Labour:Conditions of construction workers in India, wages paid to workers
	24th	Labour Welfare Fund Act 1936 (as amended)
9th	25th	- Payment of Wages Act 1936 (as amended)
	26th	- Minimum Wages Act 1948 (as amended)
	27th	Control of Progress:Methods of recording progress
	28th	Analysis of progress

10th	29th	Taking corrective actions keeping head office informed
	30th	Cost time optimization for simple jobs - Direct and indirect cost, variation with time, cost optimization
11th	31st	Inspection and Quality Control: Need for inspection and quality control
	32nd	Principles of inspection
	33rd	Stages of inspection and quality control for Earth work - Masonry - RCC Sanitary and water supply services
12th	34th	Accidents and Safety in Construction:
	35th	Accidents – causes and remedies
	36th	Safety measures for Excavation work ,Drilling and blasting ,Demolitions
13th	37th	Hot bituminous works, Scaffolding, ladders, form work
	38th	Safety campaign and safety devices , Public Work Accounts:
	39th	Introduction, technical sanction,
14th	40th	administrative approval, allotment of funds, reappropriation ,of funds bill, contractor ledger,
	41st	measurement book running and final ,account bills complete,
	42nd	preparation of bill of quantities (BOQ), completion ,certificate & report, hand receipt, aquittance roll. Muster Roll labour,
	43rd	casual labour roll-duties and responsibility of different cadres, budget-stores, returns,account of stock, misc. P.W. advances T & P

15th	44th	verification, survey report, roadmetal material charged direct to works, account - expenditure & revenue head,
	45th	remittance and deposit head, defination of cash, precaution in custody of cashbook, imprest account, temporary advance, treasury challan, preparation of finalbills. Students must learn to prepare accounts register, stock register.

<b>Name of Faculty: (theory) MR. GULSHAN NAGAR</b>		
Discipline: - civil		
Semester:- <b>6th</b> (diploma)		
subject: - <b>EARTHQUAKE RESISTANCE BUILDING CONSTRUCTION</b>		
<b>WEEKS</b>	<b>topic(including assignment/test)</b>	
1st	1st	Elements of Engineering Seismology
	2nd	General features of tectonic of seismic regions.
	3rd	Causes of earthquakes, Seismic waves
2nd	4th	earthquake size (magnitude and intensity)
	5th	Epicentre, Seismograph
	6th	Classification of earthquakes,
	7th	Static and Dynamic loading,Fundamental period

3rd	8th	.Seismic zoning map of India,
	9th	Seismic Behaviour of Traditionally-Built Constructions of India
4th	10th	Performance of building during earthquakes
	11th	Mode of failure Out-of-plane failure, in-plane failure
	12th	Diaphragm failure, Connection failure
5th	13th	Non-structural components failure)
	14th	Special construction method,
	15th	tips and precautions to be observed while planning,
6th	16th	designing of earthquake resistant building.
	17th	construction of earthquake resistant building.
	18th	Introduction to IS: 4326
7th	19th	Introduction IS: 13828
	20th	Introduction IS: 1893(Part 1),
	21st	Introduction 154326 and IS: 13920
8th	22nd	Seismic Provision of Strengthening
	23rd	Retrofitting Measures for Traditionally-Built Constructions

	24th	Brick and RCC Structures
9th	25th	Provision of reinforcement detailing in masonry
	26th	Provision of reinforcement detailing in RC constructions
	27th	Disaster Management
10th	28th	Disaster rescue
	29th	psychology of rescue,
	30th	rescue workers,
11th	31st	rescue plan,
	32nd	rescue by steps
	33rd	rescue equipment,
12th	34th	safety in rescue operations
	35th	debris clearance
	36th	casualty management.
13th	37th	site visit
	38th	site visit
	39th	site visit

14th	40th	revision
	41st	revision
	42nd	revision
15th	43rd	revision
	44th	revision
	45th	revision

<b>Name of Faculty: (theory) MR. MAHENDER</b>		
Discipline: - civil		
Semester:- <b>6th</b> (diploma)		
<b>subject - quantity surveying &amp; valuation</b>		
<b>week</b>	<b>theory</b>	
	<b>topic(including assignment/test)</b>	
1st	1st	Introduction to quantity surveying & important
	2nd	Duties of quantity surveyor
	3rd	Types of estimates ,preliminary,plinth area,cubic rate estimate
	4th	Estimate per unit base,detailed estimates defination

2nd	5th	Stages of preparation – details of measurement
	6th	calculation of quantities and abstract
3rd	7th	Units of measurement for various items of work as per BIS:1200
	8th	Rules for measurements Different methods of taking out quantities
	9th	A small residential building with a flat roof and pitched roof building
4th	10th	Earthwork for unlined channel WBM road and pre-mix carpeting
	11th	Single span RCC slab culvert, Earthwork for plain and hill roads
	12th	RCC work in beams, slab, column and lintel, foundations
5th	13th	users septic tank - 10 users
	14th	Calculation of quantities of materials
	15th	Cement mortars of different proportion
6th	16th	Cement concrete of different proportion
	17th	Brick/stone masonry in cement mortar ,Plastering and pointing
	18th	White washing, painting R.C.C. work in slab, beams
7th	19th	Steps involved in the analysis of rates. Requirement of material, labour,
	20th	Earthwork in excavation in hard/ordinary soil and filling



	21st	RCC in roof slab/beam/lintels/columns
8th	22nd	Brick masonry in cement mortar,Cement Plaster
	23rd	White washing, painting Stone masonry in cement mortar
	24th	Running and maintenance cost of construction equipment
9th	25th	Meaning of contract Qualities of a good contractor and their qualifications
	26th	Essentials of a contract Types of contracts, their advantages, dis-advantages
	27th	Single and two cover-bids; tender, tender forms and documents, tender notice,
10th	28th	Classification and types of contracting firms/construction companies
	29th	Preparation of Tender Document based on Common Schedule Rates (CSR)
	30th	Earth work ,Construction of a small house as per given drawing
11th	31st	RCC works,Pointing, plastering and flooring
	32nd	White-washing, distempering and painting
	33rd	Wood work including polishing
12th	34th	Sanitary and water supply installations
	35th	False ceiling, aluminum (glazed) partitioning
	36th	Tile flooring including base course

13th	37th	Construction of W.B.M/Concrete road
	38th	Exercises on preparation of comparative statements for item rate contract
	39th	Purpose of valuation, principles of valuation
14th	40th	Definition of various terms related to valuation like
	41st	depreciation, sinking
	42nd	fund, salvage and scrap,value
15th	43rd	market value, fair rent, year's purchase etc.
	44th	Methods of valuation (i) replacement cost method
	45th	(ii) rental return method

<b>Name of Faculty: (theory) MR. SHUBHAM KUMAR GUPTA</b>	
Discipline: - civil	
Semester:- <b>6th</b> (diploma)	
<b>subject - Railway ,bridge and tunnel</b>	
<b>week</b>	<b>theory</b>
	<b>topic(including assignment/test)</b>
1st	Introduction to Indian Railways

1st	2nd	Railway surveys: Factors influencing the railways route
	3rd	various types of railway survey
2nd	4th	Classification of permanent way describing its component parts
	5th	Rail Gauge: Definition, types, practice in India
	6th	Rails – types of rails
3rd	7th	Rail Fastenings: Rail joints, types of rail joints, fastenings for rails, fish plates,
	8th	Sleepers: Functions of sleepers, types of sleepers, requirements of sleepers
	9th	Ballast: Function of ballast, requirements of an ideal material for ballast
4th	10th	Crossings and signallings: Brief description regarding different types of crossings
	11th	Maintenance of track: Necessity, maintenance of track, inspection of soil, track
	12th	maintenance and boxing of ballast maintenance gauges, tools
5th	13th	Earth work an drainage: Features of rail road, bed level, width of formation
	14th	slopes, drains, methods of construction, requirement of drainage system
	15th	Introduction of bridge
6th	16th	its function and component parts, difference between a bridge and a culverts
	17th	Classification of Bridges

	18th	Their structural elements and suitability:According to life-permanent and temporary
7th	19th	According to deck level – Deck, through and semi-through
	20th	According to material –timber, masonry, steel, RCC, pre-stressed
	21st	According to structural form,Grade Separators-Railway Overbridges (ROB), Railway underbridge (RUB)
8th	22nd	Beam type –RCC, T-Beam, steel girder ,bridges, plate girder and
	23rd	box girder, balanced cantilever, Trussed bridges
	24th	Arch type – open spandrel and filled spandrel barrel and rib type,
9th	25th	According to the position of highest flood level submersible and non submersible,
	26th	Suspension type – unstiffened and stiffened and table (its description with sketches)
	27th	IRC classification
10th	28th	Bridge Foundations
	29th	Introduction to open foundation, pile foundation
	30th	well foundation
11th	31st	Piers, Abutments and Wingwalls
	32nd	Piers-definition, parts; types –solid (masonry and RCC), open
	33rd	Abutments and wing walls – definition, types of abutments (straight and tee), abutment with wing walls (straight, splayed, return and curved)

12th	34th	Launching of Equipment Bridges
	35th	Bridge bearings
	36th	Purpose of bearings; types of bearings – fixed plate, rocker and roller.
13th	37th	Maintenance of Bridges
	38th	Inspection of Steel and Equipment bridges
	39th	Routine maintenance
14th	40th	Definition and necessity of tunnels
	41st	Typical section of tunnels for a national highway and single and double broad gauge railway track
	42nd	Ventilation –necessity and methods of ventilation, by blowing, exhaust and combination of blowing and exhaust
15th	43rd	Drainage method of draining water in tunnels
	44th	Lighting of tunnels
	45th	Bridge construction site or a Bridge/Tunnel construction site/Railways tracks to explain the various components