RAJIV GANDHI PROUDYOGIKI VISHWAVIDYALAYA, BHOPAL
DIPLOMA IN CIVIL ENGINEERING
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PROGRAMME NAME: Three years Diploma in CIVIL ENGINEERING
Name of Scheme: Jul.08 **Implemented from Session 2008 – 2009**
Scheme of Studies and Examinations for: SIXTH SEMESTER **Exam Code:**

COURSE CODE	COURSE TILE	PAPER CODE	THEORY COMPONENT								PRACTICAL COMPONENT						TOTAL
			LECTURES Hrs. PER WEEK	CONTINUOUS			END OF THE SEMESTER EVALUATION			TOTAL MARKS	PRACTICAL Hrs. Per week	CONTINUOUS EVALUATION	END OF THE SEMESTER EVALUATION			TOTAL	
				TERM WORK	PROGRESSIVE TESTS (TWO)		THEORY PAPER					LAB WORK	PRACTICAL/ORAL EXAMINATION (VIVA)				
					I	II	NO	MARKS	DURATION (Hrs)				NO	MARKS	DURATION (Hrs)		
601	P.H.E.	6185	06	15	10	10	01	100	3Hrs	135	02	15	01	50	3Hrs	65	200
602	Q.S.C-II	6186	06	15	10	10	01	100	3Hrs	135	02	15	01	50	3 Hrs	65	200
603	S.D.D.-II (Steel)	6187	06	15	10	10	01	100	3Hrs	135	02	15	01	50	3Hrs	65	200
604	Project		-	-	-	-	-	-	-	-	10	100	01	200	3Hrs	300	300
605	Professional Activities										02	GRADE TO BE AWARDED					
Total			18	45	30	30	03	300		405	18	145	04	350		495	900

1.	Number of Theory papers	03	Passing marks for	
2.	Total Theory marks	300	Theory	33%
3.	Number of Practical's	04	Practical	40%
4.	Total practical marks	350		
5.	Total marks of term work +lab work + prog.asst.	250	Seasonal	60%

CURRICULUM

FOR

DIPLOMA IN CIVIL ENGINEERING

(SIXTH SEMESTER)

Scheme: Jul.08
Implemented from session: 2009-10

Under semester system

JULY 2008

CURRICULUM DEVELOPMENT CENTRE,
DEPARTMENT OF CIVIL ENGINEERING
(MJP GOVT. POLYTECHNIC COLLEGE, KHANDWA)

RAJIV GANDHI PROUDYOGIKI VISHWAVIDYALAYA, BHOPAL

DIPLOMA IN CIVIL ENGINEERING

SEMESTER: **SIXTH** SCHEME: **Jul.08**
COURSE CODE: **601** COMMON WITH PROGRAM (CTM):
NAME OF COURSE: **PUBLIC HEALTH ENGINEERING** PAPER CODE: **6185**

R A T I O N A LE

One of the basic needs of life is water. It must be supplied to all the people in required quantity and quality. A technician should be well aware and well trained to meet the water and sanitary requirement of the public, hence the course on PHE is included. For protection of environment, proper collection, conveyance and disposal of waste water and solid refuse are necessary. This again reinforces the necessity of study of water supply and sanitary engineering in the civil engineers in Diploma programme .

This course is aimed mainly at study of water supply and sanitary engineering. Without proper arrangement for house water supply and sanitation, the purpose of municipal water supply and drainage will be defeated.

At present, entire cultural history, man is facing one of the most horrible ecological crises- the problem of pollution of his environment which some times in past was pure, virgin, undisturbed, uncontaminated and basically quite hospitable for him. Hence there is a need to study the problems related to environment in general and water pollution, land pollution, air pollution, solid waste management and noise pollution etc.; in particular.

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SEMESTER: **SIXTH** SCHEME: **Jul.08**
COURSE CODE: **601** COMMON WITH PROGRAM (CTM):
NAME OF COURSE: **PUBLIC HEALTH ENGINEERING** PAPER CODE: **6185**

Lectures: **6** Hrs. per week
Practical: **2** Hrs. per week

SCHEME OF STUDIES

S.No.	Topics	Theory Hrs.	Practical Hrs.	Total
1.	Introduction	02	-	02
2.	Quantity of Water & Sources of Water	12	-	12
3.	Quality of Water & purification of water	20	14	34
4.	Conveyance and Distribution of Water	10	-	10
	SANITARY ENGINEERING			
5.	Building Sanitation	10	02	12
6.	Systems of Sewerage & Sewer Appurtenances	15	02	17
7.	Analysis of Sewage & Sewage Treatment Processes	15	12	27
8	Rural Sanitation	06	-	06
	Total	**90**	**30**	**120**

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CONTENT DETAILS

S.No.	Course Contents	Hrs of Study
01.	**Introduction :** Duties of P.H. Engineer, Need and importance of P.H.E.	02
02	**Quantity of Water & Source of water :** Demands of water: Domestic, Industrial, Commercial & Institutional, Public use, Losses and wastes, Fire demand ;Factors affecting rate of Demand, Variations of water demands, Forecasting of population, Methods of forecasting of population, Design period for water supply scheme. Estimation of quantity of water supply required for a town or city, Types of water supply schemes **Source of water :** Surface and Subsurface sources of water **,**Ground water, Open well, Tube-Well, infiltration well, infiltration gallery, infiltration pipes. Construction of dug well. Construction of tube well, Well Testing. Yield of well., Intake Structures-Definition and types, Factors governing the location of an intake structure, Water conservation, Ground water recharging – Necessity Importance and advantages.	12
03	**Quality of Water & Purification of Water :** Effect of different impurities on water, surface/ground water , Water borne disease. Need for analysis of water, Characteristics of water-Physical, Chemical and Biological, Testing of water for Total solids, hardness, chlorides, dissolved Oxygen, pH, Bacteriological tests, Sampling of water, Water quality standards as per I.S. **Purification of Water :** Screening- Types of screens, Aeration- objects and methods of aeration, Plain sedimentation, Sedimentation with coagulation, principles of coagulation, types of coagulants, Jar Test, process of coagulation, types of sedimentation tanks, Filtration theory of filtration, classification of filters : slow sand filter, rapid sand filter, pressure filter, domestic filter, filter media, construction and working of slow sand filter and rapid sand filter, Disinfection: Objects, methods of disinfection, Chlorination- Application of chlorine, forms of chlorination, types of chlorination practices, residual chlorine and its importance, Flow diagram of water treatment plants,	20

S.No.	Course Contents	Hrs of Study
04	**Conveyance and Distribution of Water :** Types of Pipes used for conveyance of water, choice of pipe material, Types of joints & Types of valves- their use, location and function on a pipeline. Methods of distribution of water- Gravity, pumping, and combined system Service reservoirs – functions and types , Layouts of distribution of water- Dead end system, grid iron system, circular system, radial system ; their suitability, advantages and disadvantages	10
	SANITARY ENGINEERING	
05	**Building Sanitation :** Importance and necessity of sanitation, Necessity to treat domestic sewage, Recycling and Reuse of domestic waste Definitions- Sewage, sullage, types of sewage, Definitions of the terms related to Building Sanitation-Water pipe, Rain water pipe, Soil pipe , Sullage pipe, Vent pipe, Building Sanitary fittings- Water closet – Indian and European type, flushing cistern, wash basin, sinks, Urinals, Traps- types, Systems of plumbing – one pipe, two pipe, single stack, layout plan for building sanitary fittings (drainage plan) , inspection and junction chambers, their necessity, location.	10
06	**Systems of Sewerage :** Types of Sewers, Systems of Sewerage, Principle of Design of sewers, self cleansing velocity and non scouring velocity Laying, Testing and maintenance of sewers. Sewer Appurtenances**,** Manholes and Drop Manhole-component parts, location, spacing, Sewer Inlets ,Street Inlets, Flushing Tanks – manual and automatic.	15
07.	**Analysis of Sewage :** Characteristics of sewage, B.O.D./ C.O.D. and significance. , Aerobic and anaerobic process, Madhya Pradesh Pollution Control Board Norms for the discharge of treated sewage. **Treatment of Sewage :** Objects of sewage treatment, General layout and flow diagram, Screening, Grit removal, Skimming, Sedimentation of sewage, Sludge digestion, Trickling filters, Activated sludge process, Disposal of sewage, Septic tank, Oxidation pond, Oxidation ditch. Common Complaints in the operation of septic tank and remedies**.**	15
08	**Rural Sanitation :** Environmental Sanitation Necessity and importance, Rural sanitation- Types of Privies – Aqua privy and Bore Hole Latrine construction and working Composting (Nadep or Vermiculture).	06

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NAME OF COURSE: **PUBLIC HEALTH ENGINEERING** PAPER CODE: **6185**

S.No.	Name of Experiment	Hrs. of Pract.
A	**EXERCISES** 1. Turbidity test. 2. Colour test. 3. Test for PH, Hardness, Chlorides, Iron & manganese. 4. Test for B-Coil. 5. Test for residual chlorime. 6. Test for total, volatile, fixed suspended and settable. 7. Test for D.O., B.O.D., C.O.D. and starbility. 8. To determine suspended solids, dissolved solids and total solids of waste water sample. 9) Design the Septic Tank for the public building such as hostel or hospital. Draw Plan and Section of the same along with the drainage arrangement in soak pit.	30
(B)	**VISITS :** 1. Intake site and adjoining pumping station. 2. Water treatment plant and testing lab. 3. Sewage treatment plant.	

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NAME OF COURSE: **PUBLIC HEALTH ENGINEERING** PAPER CODE: **6185**

LIST OF REFEENCE BOOKS

S.No.	Title	Author	Publisher
1	Text Book of Water supply and sanitary Engg.	Husain. S.K.	Oxford and IBH publlshing Co. New Delhi
2.	Water supply and Sanitary Engg.	Birdie, G.S. and Bridie, J.S.	Dhanpat Rai & Sons, Delhi
3	Jal Apurti Evam Swachchhata Engg.	Sunil and Rajjan	Navbhart Prakashan, Meerut
4	Water Supply & Sanitary Engg.	Gurucharan Singh	Standard Publishers
5	The committee on PHE Manual and code of practice, The Ministry of Health, Govt. of India, “PHE Manual and code of practice – Sections, I, II, III and IV.		
6.	I.S. : 1172, 1742, 2065, 2470 and 5329		
7.	Lok Swasthya Yantriki	Saxena, A.K.,	Deepak Prakashan Gwalior
8	Environmental Engg. (Volume I & II)	Santosh Garg	Khanna Publishers,
9	Water Supply & Sanitary Engg	S.C. Rangwala.	Charottas Publishing House,

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DIPLOMA IN CIVIL ENGINEERING

SEMESTER: **SIXTH** SCHEME: **Jul.08**
COURSE CODE: **602** COMMON WITH PROGRAM:
NAME OF COURSE: **QUANTITY SURVEYING & COSTING-II** PAPER CODE: **6186**

R A T I O N A L E

One of the job specifications of a diploma holder is to prepare estimate of civil Engineering structures as for cost and quantity of various construction materials required. This is an essential and basic requirement for all projects. This is the first step towards efficient management of the project including proper estimation and utilization of human resources required for the project. This subject is in continuation of quantity surveying and costing-I.

In this chapter, the timber structure, R.C.C. structures and steel structures Bridge and culverts, water supply and sanitary Engineering are included. The students will be able to calculate the quantity of works of the structures of the above - mentioned chapters.

A chapter on valuation and rent fixation is also included so that the students will be familiar with the method for valuation work and fixing rent. Basic Introduction of software related to estimating & costing are also included which help students to work in the field with the software.

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SEMESTER: **SIXTH** SCHEME: **Jul.08**
COURSE CODE: **602** COMMON WITH PROGRAM:
NAME OF COURSE: **QUANTITY SURVEYING & COSTING-II** PAPER CODE: **6186**

Lectures: **6** Hrs. per week
Practical: **2** Hrs. per week

SCHEME OF STUDIES

S.No.	Topics	Theory Hrs.	Practical Hrs.	Total
1.	Estimate of R.C.C. Structure	20	**05**	25
2.	Estimate of Steel/Timber Structure	20	**10**	30
3.	Estimate of Culverts and Bridges	18	**05**	23
4.	Estimate of water supply and sanitary fittings	12	**05**	17
5.	Valuation and Rent fixation.	20	**05**	25
	Total	**90**	**30**	**120**

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NAME OF COURSE: **QUANTITY SURVEYING & COSTING-II** PAPER CODE: **6186**

Lecture Hours : 6 Hours per week

CONTENT DETAILS

S.No.	Course Contents	Hrs of Study
1.	**Estimate of R.C.C. Structure :** Estimate of slab, beam, T-beam. Estimate of R.C.C. column with its footing. Preparation of Abstract of above items. Preparation of Bar bending schedule, and to calculate amount of steel.	20
2.	**Estimate of Steel / Timber Structures :** Estimate of steel column (Stanchion) Estimate of steel Truss and Gusset Plate. Estimate of Roof covering materials.G.I. Roof, A.C. Roof. Estimate of steel frames for Doors & Windows. Estimate of Wooden Doors and Windows. Estimate of Roof Covering materials.	20
3.	**Estimate of Culverts & Bridges :** Estimate of Hume pipe culvert with splayed type of wing wall, Turn wall, face wall. Estimate of R.C.C. slab bridge, straight type wing walls.	18
4.	**Estimate of Water Supply and Sanitary Fittings :** Detailed Estimate of Water Supply for building work. Detailed Estimate of Sanitary works for building work. Estimate of S.W. pipe line. Estimate of Septic Tank.	12
5.	**Valuation & Rent Fixation :** Definition, Necessity of Valuation. Defination, Cost price, Value, Difference between them. Types of value, Book value, scrap value, salvage value, Market value, Depreciation, obsolescence, Sinking fund. Methods of calculation of depreciation, straight line method, sinking fund method constant percentage method, quantity survey method. Computation of capitalized value, Gross income, outgoing, net income, Years purchase. Types of outgoing and their percentages. Valuation of Lands & Buildings, factors affecting their valuation, Fixation of Rent as per PWD practice.	20

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Practical Hours : hour per week

LIST OF EXPERIMENT

S.No.	Name of Practical	Hrs of Pract.
01.	Use of different Schedule of Rates like .PWD.C.P.W.D. D.S.R.,RES, HOUSING BOARD ,IRRIGATION & PHE	05
02.	Estimating & abstract and rate analysis with the help of different software eg. QE-PRO, ESTIMATOR, & Print out of report .	05
03.	Taking out quantities of following items for small R.C.C. Hall i) Concreting for footing, Column, Beam, slab. ii) Reinforcement for above items by preparing Schedule of bars. **iii) Form work for all above items.**	06
04.	Preparing Rate analysis of following items: Building work – Brick work, P.C.C., R.C.C., Plastering, Flooring, Doors, Windows	06
05.	Taking out quantities of Steel work for given shed supported on steel trusses & having GI sheet/profile sheet roofing.	04
06.	Taking out quantities of work for pipe culvert. (Drawings shall be provided for the above exercises by subject teacher.)	04
	Total Hours	30

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NAME OF COURSE: **QUANTITY SURVEYING & COSTING-II** PAPER CODE: **6186**

LIST OF REFEENCE BOOKS

S.No	Title	Author	Publisher
1	Estimating and costing	By. B.N. Dutta	S.Datta & Co. Tagroe Path Motilal Bose Road, Lucknow.
2.	Estimating and costing & Valuation	By Rangwala	Charotar Publications Station Road, Anand
3	Estimating & Costing	By Birdie, J.C, Kapoor	Dhanpat Rai & Sons Delhi and Jullunder.
4	Estimating & Costing Vol-I & Vol.-II	By J.C. Malhotra	Khanna Publishers 2B, Nath Market, Nai Sarak New Delhi
5	Current Schedule of Rates fromPWD/PHE/Irrigation Deptts.		

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DIPLOMA IN CIVIL ENGINEERING

SEMESTER: **SIXTH**
COURSE CODE: **603**
NAME OF COURSE: **STRUCTURAL DESIGN & DRAFTING-II (STEEL)**

SCHEME: **Jul.08**
COMMON WITH PROGRAM☹CTM)
PAPER CODE: **6187**

RATIONALE

Design of steel structure is the subject placed at technology level. This subject requires prerequisite knowledge, skill and competencies acquired from the subject applied mechanics and mechanics of structure. Steel is extensively used as a construction material in the construction of civil engineering work such as high rise buildings, industrial building, transmission towers, railway bridges, overhead tanks, chimney, bunkers, silos etc. Construction in steel is to be supervised by Civil Engineering Technicians. For effective supervision and quality control Technicians must have good knowledge of design of steel structure. The design of steel structure involve the planning of structure for specific purpose, proportioning and selection of members to carry loads in most economic manner and erection of structure at site. This can be achieved by proper functional planning and providing adequate strength to withstand direct and induced forces which may acts on the structure during its life time. The knowledge of material properties and behaviors of structural member, methods of structural analysis, determining design loads and method of design by using latest IS codes and hand books and design aids.

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DIPLOMA IN CIVIL ENGINEERING

SEMESTER: **SIXTH**
COURSE CODE: **603**
NAME OF COURSE: **STRUCTURAL DESIGN & DRAFTING-II (STEEL)**

SCHEME: **Jul.08**
COMMON WITH PROGRAM (CTM)
PAPER CODE: **6187**

Lectures: **6** Hrs. per week
Practical: **2** Hrs. per week

SCHEME OF STUDIES

S.No.	Topics	Theory Hrs.	Practical Hrs.	Total
1.	Introduction	04	---	04
2.	Connections	14	04	18
3.	Tension Member	12	02	14
4.	Compression member	16	08	24
5.	Column bases	08	08	16
6.	Steel Beam	14	--	14
7.	Roof Truss	14	08	22
8.	Timber structures	08	---	08
	Total	**90**	**30**	**120**

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SEMESTER: **SIXTH** SCHEME: **Jul.08**
COURSE CODE: **603** COMMON WITH PROGRAM (CTM)
NAME OF COURSE: **STRUCTURAL DESIGN & DRAFTING-II (STEEL)** PAPER CODE: **6187**

Lecture Hours : Hours per week

CONTENT DETAILS

S.No.	Course Contents	Hrs of Study
1.	**Introduction :** Types of sections used, Hollow Square section Rectangular section Tubular section, Z Section, Angle Section, T, I, C, L Section etc. Grades of steel and strength characteristics; advantages and disadvantages of steel as construction material; Use of steel table and relevant I. S. code; Types of loads on steel structure and its I. S. code specification.	04
2.	**Connections :** Riveted connections, Types of rivets and their use, Nominal dia, Gross dia. Unwin's formula, Pitch of rivets, Edge distance, Tacking rivets, permissible stress in rivet riveted joint and its failure, Strength of riveted joint and efficiency of a riveted joint. Assumptions in theory of riveted joint, Design of riveted joint for axially loaded member. Eccentric riveted connection Welded connection Introduction, Permissible stress in weld, strength of weld, advantages and disadvantages of welded joint. Types of weld and their symbols. Design of fillet weld and butt weld subjected to axial load.	14
3.	**Tension member :** Types of Sections used, Permissible Stresses in Axial Tension, gross and net cross sectional area of tension member, Analysis and design of tension member with welded and riveted connection.	12
4.	**Compression Member :** Criteria of failure of short column and long column , end conditions effective length of a column, slenderness ratio and corresponding compressive stress : Angle struts Types of sections used, Analysis and Design of axially loaded angle struts with welded and riveted connection. Stanchion and Columns, types of sections used, simple and built up sections. Analysis and design of axially loaded column. Design of compound column. Design of lacing angles and Batten plates.	16
5.	**Column Bases :** Types of column bases ,design of slab base & concrete block. Cleat angles, their use, introduction to gusseted base (no numerical problems on gusseted Base)	08

6.	**Steel Beams :** Different steel sections used; Simple and built-up sections Permissible bending stresses. Design of simple beams, check for shear only. Design of built-up beams (Symmetrical I Section with cover plates only), check for shear only, bending, bearing and deflection. Introduction to Plate Girder: Various components and their functions. (No numerical Problem on Plate Girder)	14
7.	**Roof Truss :** Types of steel roof truss & its selection criteria. span and slope, Rise and pitch, loads acting on the Roof. Dead load; Live load and wind load as per I.S. 875-1987. Combination of loads for design of truss, Forces in the members (Graphical method). Design of members of truss, Design of Angle purlin as per I.S.06 16 .Arrangement of members.	14
8.	**Timber Structures :** Grades of Timber – stress in timber. Factors affecting stress/ strength of timber. Design of Timber column & Timber Beam.	08

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NAME OF COURSE: **STRUCTURAL DESIGN & DRAFTING-II (STEEL)** PAPER CODE: **6187**

Practical Hrs. : 02 hours Per week

S.No.	Name of Practical	Hrs of Pract.
1.	**PRACTICAL:** Term work shall consists of sketch book and design report of steel roof truss for an industrial building. Sketch book shall consists of any five plates out of the below mentioned 1. Sketching of different types of riveted joints and welded joints. Typical sketches of sections of tension member, determination of net effective cross-sectional area of tension member for angle section. 2. Typical sketches of sections of compression member, lacing and battening. 3. Graphical solution of frames to find out the stress in the member. Type of trusses for different spans. 4. Working drawing of steel truss with the details of joint 5. Detailed drawing of slab base and gusseted base. 6. Important information of clauses of IS800-1984 and IS875 (Part-1,2 & 3)	30

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NAME OF COURSE: **STRUCTURAL DESIGN & DRAFTING-II (STEEL)** PAPER CODE: **6187**

LIST OF REFEENCE BOOKS

S.No.	Title	Author	Publisher
1	Steel structures	By Ramanatham	
2.	Structural Engg. Vol.-IV (Steel)	By Vazirani	
3	Steel Structures	By Ramchandra	
4	Steel Structures	By Arya and Ajmani	
5	Steel Structures	By Malhotra M.M.	
6.	I.S. Code 800-1984		
7.	Steel Structures	By R.K. Dhoble & D.S. Dharmadhikari	
8.	Steel Structures	Negg.	

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DIPLOMA IN CIVIL ENGINEERING

SEMESTER: **SIXTH**
COURSE CODE: **604**
NAME OF COURSE: **PROJECT**

SCHEME: **Jul.08**
COMMON WITH PROGRAM : (CTM)
PAPER CODE:

R A T I O N A L E

The project work is an important subject, which aims at closer co-ordination and integration between theory and practice. It gives access to the winder range of field techniques, helps to develop planning and decision making skills. It develops confidence in students to work independently, participating in group task, helps in comprehending knowledge of various subjects, in practical aspect apart from what is taught in classroom and also helps in tackling live problems.

Major project is prescribed so that a student gets complete idea of planning and estimating a project and writing a project report.

The minor project work will also help the student to be acquainted with modern materials, equipments and the market cost analysis.

The overall project work will help the student to become an entrepreneur than depending on govt. jobs and services.

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DIPLOMA IN CIVIL ENGINEERING

SEMESTER: **SIXTH** SCHEME: **Jul.08**
COURSE CODE: **604** COMMON WITH PROGRAM : (CTM)
NAME OF COURSE: **PROJECT** PAPER CODE:

Lecture Hours : 10 Hours per week

CONTENT DETAILS

S.No.	Course Contents	Hrs of Study
01	**Introduction** : Importance of project work, guide line and general introduction	
02	**Selection of Project** : The project can be selected from any four civil engineering system like Building construction system, transportation engineering system, irrigation engineering system. A topic for project can also be selected on recent development in civil engineering.	
03	**Planning of project :** Planning of field work, line of action, work distribution, data to be collected by different batches**.** projects to be undertaken by a group of 4 to 6 students**.**	
04	**The project report shall be in the following format:** • Topic and objectives • Collection of data, required survey work, • Management and construction procedure • Resources scheduling and networking • Design details • Required drawing set • Utility to society if any • Conclusion	

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DIPLOMA IN CIVIL ENGINEERING

SEMESTER: **SIXTH**
COURSE CODE: **604**
NAME OF COURSE: **PROJECT**

SCHEME: **Jul.08**
COMMON WITH PROGRAM : (CTM)
PAPER CODE:

LIST OF CIVIL ENGINEERNG PROJECTS:

1) Design of Check Dam/Stop Dam.
2) Study of G Dam (Earthen/Gravity)
3) Micro irrigation –Drip/Sprinkler Irrigation.
4) Junction planning for city roads/planning for roads for congested area/parking Studies etc.
5) Rain water harvesting for domestic or public building.
6) Campus development.
7) Interior decoration.
8) Concrete mix design.
9) Solid waste management.
10) Hospital waste disposal.
11) Recycling of resources.
12) Manufacturing of Pre cast concrete products.
13) Prestressed concrete.
14) Non conventional sources of energy.
15) Concrete pipe manufacturing unit.
16) Planning Estimating and design for residential apartments/commercial complex.
17) Planning and design of water treatment plant for given data.
18) Planning and design of water supply scheme for given lay out.
19) Planning and design of sewage treatment plant for given data.
20) Planning and design of sanitary scheme for given lay out.
21) Intelligent & green building material.
22) Low cost housing project.
23) Planning and design of overhead water tank and sump well
24) Study of Lay out of small railway station.
25) Planning & design and estimation of roads (PMGSY/MGSX/BRTS) Any other similar project can be selected.

Term Work: Shall consist of ----Detailed project report in above format. Separate drawing sheets covering details of the project shall also be prepared.

RAJIV GANDHI PROUDYOGIKI VISHWAVIDYALAYA, BHOPAL

DIPLOMA IN CIVIL ENGINEERING

SEMESTER: **SIXTH** SCHEME: **Jul.08**
COURSE CODE: **605** COMMON WITH PROGRAM :
NAME OF COURSE: **PROFESSIONAL ACTIVITIES** PAPER CODE:

R ATIONALE

Most of the diploma holders join industries. Due to globalization and competition in the industrial and service sectors the selection for the job is based on campus interviews or competitive tests. While selecting candidates a normal practice adopted is to see general confidence, attitude and ability to communicate and attitude, in addition to basic technological concepts. The purpose of introducing professional practices is to provide opportunity to students to undergo activities which will enable them to develop confidence. Industrial visits, expert lectures, seminars on technical topics and group discussion are planned in a semester so that there will be increased participation of students in learning process.

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Lecture Hours : 02 Hours per week

CONTENT DETAILS

S.No.	Course Contents	Hrs of Study
01	Structured industrial visits shall be arranged and report of the same should be submitted by the individual student, to form a part of the term work. (minimum 3 visits) Following are the suggested type of Industries/ Fields - i) Visit to RCC framed structure building for details of reinforcement. ii) Visit to water /sewage treatment plant. iii) Visit to works carried out under watershed development/micro irrigation scheme. iv) Visit to any structure undergoing rehabilitation/retrofitting.	
02	The Guest Lecture/s from field/industry experts, professionals to be arranged (2 Hrs duration), minimum 2 nos. from the following or alike topics. The brief report to be submitted on the guest lecture by each student as a part of Term work. a) HRD and civil engineering projects. b) Project planning and execution of civil engineering projects. c) PWD system of accounts d) Contract Management e) RCC design and detailing	
03	Information Search ,data collection and writing a report on the topic a) Collection of data for valuation of old building b) Collection of details of BOT project under execution. c) Collection of Data and case study of failure of RCC structure. d) Collection of information on any topic from journal available in library.	
04	The students should discuss in group of six to eight students and write a brief report on the same as a part of term work. The topic of group discussions may be selected by the faculty members. Some of the suggested topics are - a) Role of civil engineer in disaster management. b) Scope of out sourcing of civil engineering services. c) Pollution control.	
05	Seminar Presentation**:** The students should select a topic for Seminar based on recent developments in civil engineering field, emerging technology etc.	