w. e. f Academic Year 2011-12

STATE BOARD OF TECHNICAL EDUCATION, JHARKHAND

TEACHING AND EXAMINATION SCHEME FOR POST S.S.C. DIPLOMA COURSES

COURSE NAME : DIPLOMA IN ARCHITECTURAL ASSISTANTSHIP

COURSE CODE : AA

DURATION OF COURSE : 6 SEMESTERS **WITH EFFECT FROM 2011-12**

SEMESTER : SIXTH **DURATION: 16 WEEKS**

PATTERN : FULL TIME

SR. NO.	SUBJECT TITLE	Abbreviation	SUB CODE	TEACHING SCHEME			EXAMINATION SCHEME								
				TH	TU	PR	PAPER HRS	TH (01)		PR (04)		OR (08)		TW (09)		SW (16006)
								Max	Min	Max	Min	Max	Min	Max	Min	
1	Architectural Design-II	ARD	12634	01	--	06	06	100	40	--	--	50$#	20	25@	10	50
2	Design of R.C.C. Structures-II	RCC	12635	04	01	--	03	100	40	--	---	--	--	--	--	
3	Quantity Surveying & Estimating-II	QSE	12636	02	--	02	03	50	20	--	--	50#	20	25@	10	
4	Acoustics & Climatology	AAC	12637	03	--	--	03	100	40	--	--	--	--	--	--	
5	Advanced Working Drawing	AWD	12638	--	--	04	--	--	--	--	--	50#	20	25@	10	
6	Field Practices	FPS	12639	01	--	02	--	--	--	--	--	50@	20	--	--	
7	Computer Aided Drawing & Applications-II	CAD	12725	--	--	04	--	--	--	--	--	50@	20	--	--	
		TOTAL		**11**	**01**	**18**	--	**350**	**--**	**--**	**--**	**250**	**--**	**75**	**--**	**50**

Student Contact Hours Per Week: **30 Hrs.**

THEORY AND PRACTICAL PERIODS OF 60 MINUTES EACH.

Total Marks **: 725**

@ Internal Assessment, # External Assessment, [ ] No Theory Examination, $ - Dissertation.

Abbreviations: TH-Theory, TU- Tutorial, PR-Practical, OR-Oral, TW- Termwork, SW- Sessional Work

- Conduct two class tests each of 25 marks for each theory subject. Sum of the total test marks of all subjects is to be converted out of 50 marks as sessional work (SW).
- Progressive evaluation is to be done by subject teacher as per the prevailing curriculum implementation and assessment norms.
- Code number for TH, PR, OR and TW are to be given as suffix 1, 4, 8, 9 respectively to the subject code.

Course Name : Diploma in Architectural Assistantship

Course Code : AA

Semester : Sixth

Subject Title : Architectural Design-II

Subject Code : 12634

Teaching & Examination Scheme:

Teaching Scheme			Examination Scheme					
TH	TU	PR	PAPER HRS.	TH	PR	OR	TW	TOTAL
01	--	06	06	100	--	50 #	25@	175

NOTE:

- **Two tests each of 25 marks to be conducted as per the schedule given by SBTE.**
- **Total of tests marks for all theory subjects are to be converted out of 50 and to be entered in mark sheet under the head Sessional Work. (SW)**

Rationale:

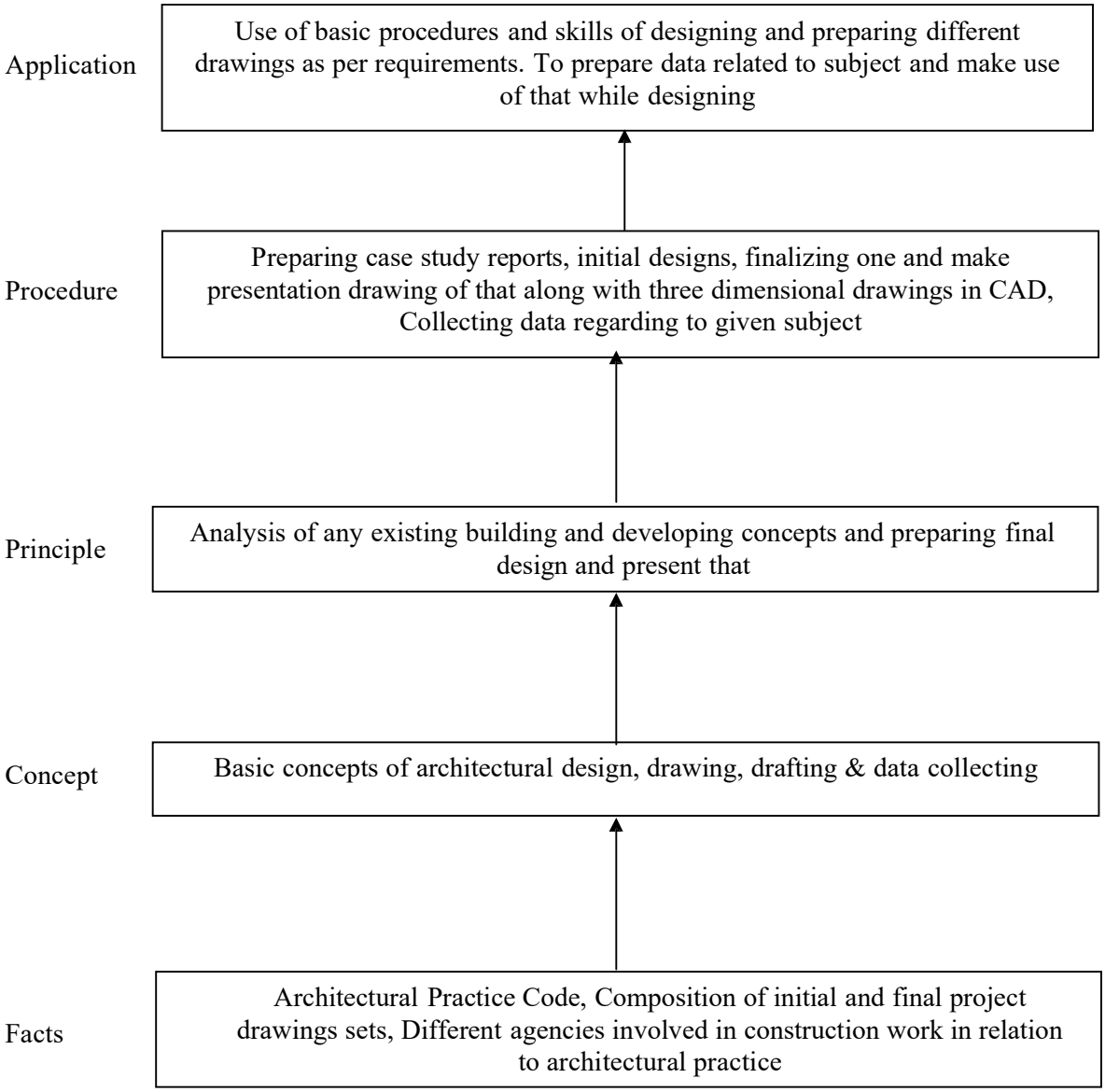
This subject will help the students to understand and attain basic skills of architectural design in order to graphically represent what they learn in other subjects. This will help the students to understand what is the actual working on design of any building.

Objectives:

The student will be able to: -

1) Understand the basic procedure and skills of designing and then presenting the drawing of any building.
2) Collect data related to subject given and with the help of that create design of his own.
3) Draw the 3D drawing in CAD

Learning Procedure:



Contents: Theory

Chapter	Name of the Topic	Hours	Marks
1	**Design of building** 1.1 Selection of the subject: The design problem may include buildings of multilevel , planning, structures upto three floors e. g. shops and departmental stores. Bank with residence, Post Office with residence, Hostels, Row houses, Multi storied offices, apartments, schools, Hotels 1.2 Collection and analysis of design of medium size buildings with multilevel complex planning **Note:** The student should learn about collection of data and requirements of prescribed buildings with actual design problem 1.3 Preliminary sketches 1.4 Finalising design and making presentation drawings 1.5 Use of advanced drafting skills in CAD, three dimensional drafting 3D view of the designed building should be done in CAD **Note:** Students are expected to select subject in consultation with subject teacher. Student should do data collection and has to submit Case – Study report along with final presentation drawings. Case study report includes data related to subject, analysis of any existing building in terms of design process, design principles, materials etc. They are also expected to submit computerized perspective view.	16	100
	Total	**16**	**100**

Practical:
Skills to be developed:

Intellectual skills:

1) Understand basic requirements for deigning different types of buildings
2) Collecting required data and use of that while designing
3) Preparing final drawing fulfilling the requirements
4) Importance of presentation drawings and new techniques such as 3D views in CAD

Motor Skills:

1) Student should do case study and submit the report which includes data related to subject and site visit reports
2) Work out the requirements and do sketches
3) Get finalized one of the sketches & start working on it.
4) Making of presentation drawing includes perspective in CAD

List of Practical:

1) Minimum one project should be completed in semester
2) Students should be asked to do case studies, prepare case study reports, initial sketches and presentation drawings.

Problem on designing of building: (Total marks – 100)
Breakup as follows: -

a) Plan	(40 marks)
b) Sections	(20 marks)
c) Elevations	(15 marks)
d) Site plan showing landscape	(15 marks)
e) Perspective view	(10 marks)

Notes:

1) The syllabus is expected to be implemented with a creative outlook. The subject teacher (of course an Architect) should find new ways and means to convey to the students designing aspects, new techniques of presentation of drawing etc.
2) Advanced drafting skills in CAD, three-dimensional drafting should be used. This exercise to be carried out in coordination with Computer Aided Drawing & Application – II subject teacher and under his guidance as well.

Learning Resources:
Books:

Sr. No.	Author	Title	Publisher & address
1	J. Callendar	Time Saver Standards	Mc Graw Hill Punlication
2	Bousmaha B.	Neufert's Data book	Black Well Science Home Page
3	C.P.Kukreja	Climate and Architecture	--
4	E. & O.E.	Planning the Architect's Handbook	Illifee & Sons, London

Course Name : Diploma in Architectural Assistantship

Course Code : AA

Semester : Sixth

Subject Title : Design of R.C.C. Structures - II

Subject Code : 12635

Teaching & Examination Scheme:

Teaching Scheme			Examination Scheme					
TH	TU	PR	PAPER HRS.	TH	PR	OR	TW	TOTAL
04	01	--	03	100	--	--	--	100

NOTE:

- **Two tests each of 25 marks to be conducted as per the schedule given by SBTE.**
- **Total of tests marks for all theory subjects are to be converted out of 50 and to be entered in mark sheet under the head Sessional Work. (SW)**

Rationale:

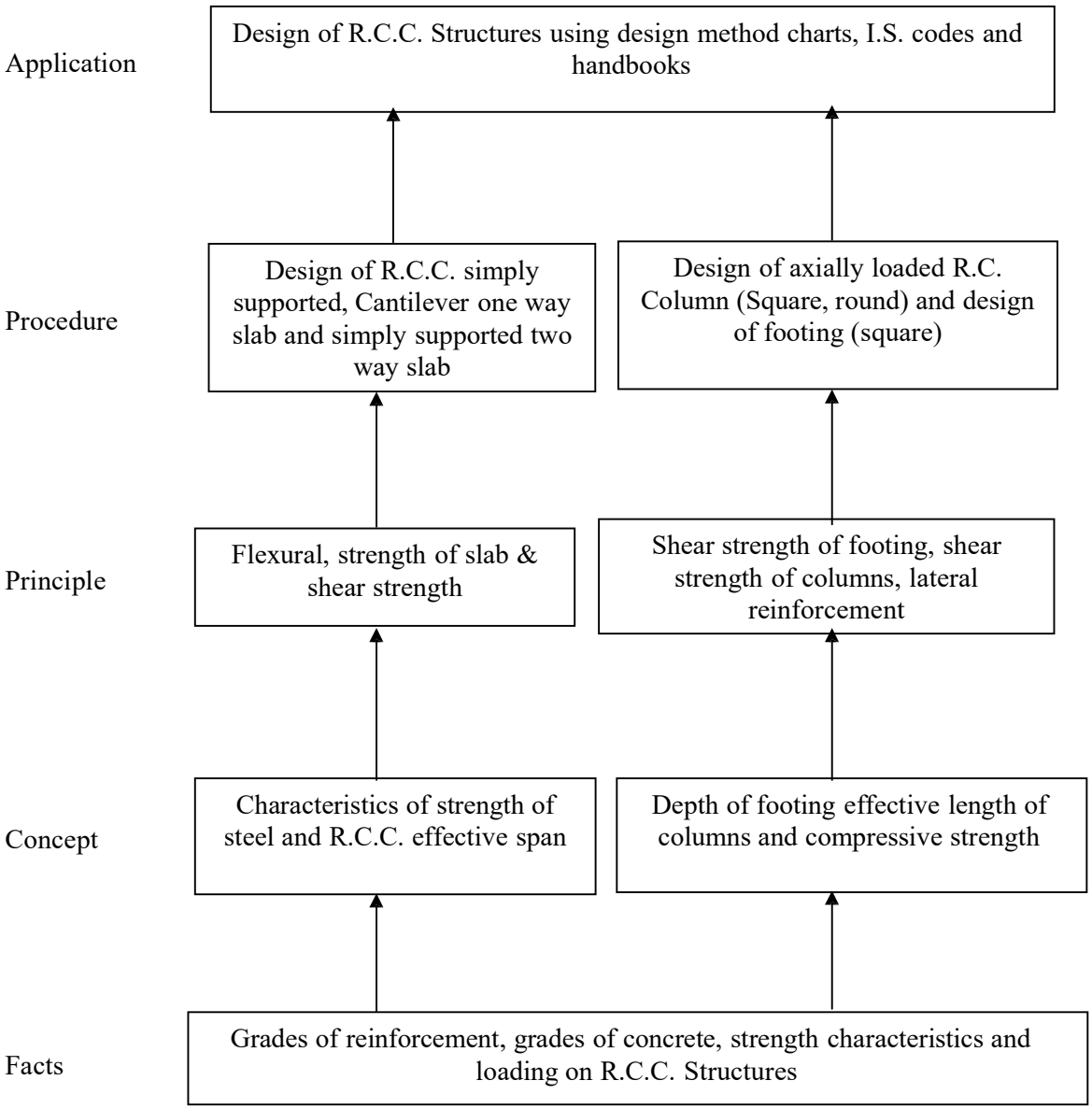
This subject will help the student to comprehend fundamental facts and concepts of designing different structural members and secure sufficient knowledge about strength and stability of structural members.

Objectives:

The students will be able to: -

1) Know different design methods of R.C.C. structures.
2) Use I.S. codes and handbooks
3) Design different structural members

Learning Structure:



Contents: Theory

Chapter	Name of the Topic	Hours	Marks
1	**Structural Design of Slab (one way)** 1.1 Simply supported rectangular slab 1.2 Clear span, effective span 1.3 Span depth ratio 1.4 Reinforcement in slab – a) Main reinforcement b) Distribution reinforcement 1.5 Maximum spacing of bars 1.6 Load on slab a) Dead load b) Live load 1.7 Principle of design and design steps (Excluding continuous Slab) a) Simply supported slab b) Cantilever slab c) Chajjas	18	30
2	**Structural Design of Slab (Two way)** 2.1 Simply supported rectangular slab (Corners free) ((Excluding continuous Slab) 2.2 Clear span, effective span 2.3 Span depth ratio 2.4 Reinforcement in slab – a) Main reinforcement 2.5 Maximum spacing of bars 2.6 Load on slab a) Dead load b) Live load 2.7 Principle of design and design steps	18	30
3	**Structural Design of Columns** 3.1 Long and short columns 3.2 Reinforcement 3.3 Design steps, IS Specifications for design of column 3.4 Simple problems for columns loaded axially only. Introduction to Uniaxial and Biaxial bending. (No numerical on these two }	10	20
4	**Structural Design of Footing** 4.1 Size of footing 4.2 Upward soil pressure 4.3 Permissible shear stress 4.4 Shear force 4.5 Depth of footing 4.6 Bending moment 4.7 Reinforcement 4.8 Design steps 4.9 Simple problems on square and rectangular footing	18	20
	Total	**64**	**100**

Practical:

Skills to be developed:

Intellectual skills:

1) Should be able to read & refer I.S. codes
2) To know the types of loads, stresses acting on the section and their effects on the sections.
3) Calculate the strength of given section.

Motor skills:

1) To be able to design the section safely by using I.S. Codes - 456 for R.C.C. Section.

Tutorials:

1) Assignment on One way slab design
2) Assignment on two way slab design
3) Assignment on column design
4) Assignment on footing design

Note:

1) Subject teacher will arrange visits to understand different concept on contents
2) All problems will be solved in limit state method only.

Learning resources:
Books:

Sr. No.	Author	Title	Publisher & address
1	M.G.Shah	R.C. Theory and Design	S.G. Wasani for Macmilan India ltd. Madras, Jaipur, Bhopal
2	Ramamrutham	Design of R.C.C.Structures	Dhanpatrai &Sons, Delhi
3	Dr. B.C. Punmia, Ashokkumar Jain & Arunkumar Jain	R. C. C Designs	Laxmi Publications, Delhi

Code Practice by B.I.S., C.R.R.I.:

I.S. 456 – 1976 Code of Practice 1978(Revised) 1978 B.I.S.
I.S. 13920– 1993 Code of Practice
I.S. 1893– 1984 Code of Practice

Course Name : Diploma in Architectural Assistantship

Course Code : AA

Semester : Sixth

Subject Title : Quantity Surveying & Estimating - II

Subject Code : 12636

Teaching & Examination Scheme:

Teaching Scheme			Examination Scheme					
TH	TU	PR	PAPER HRS.	TH	PR	OR	TW	TOTAL
02	--	02	03	50	--	50#	25@	125

NOTE:

- **Two tests each of 25 marks to be conducted as per the schedule given by SBTE.**
- **Total of tests marks for all theory subjects are to be converted out of 50 and to be entered in mark sheet under the head Sessional Work. (SW)**

Rationale:

This subject will help the students to understand different methods of taking out quantities, analysis of rate and valuation (Introductory)

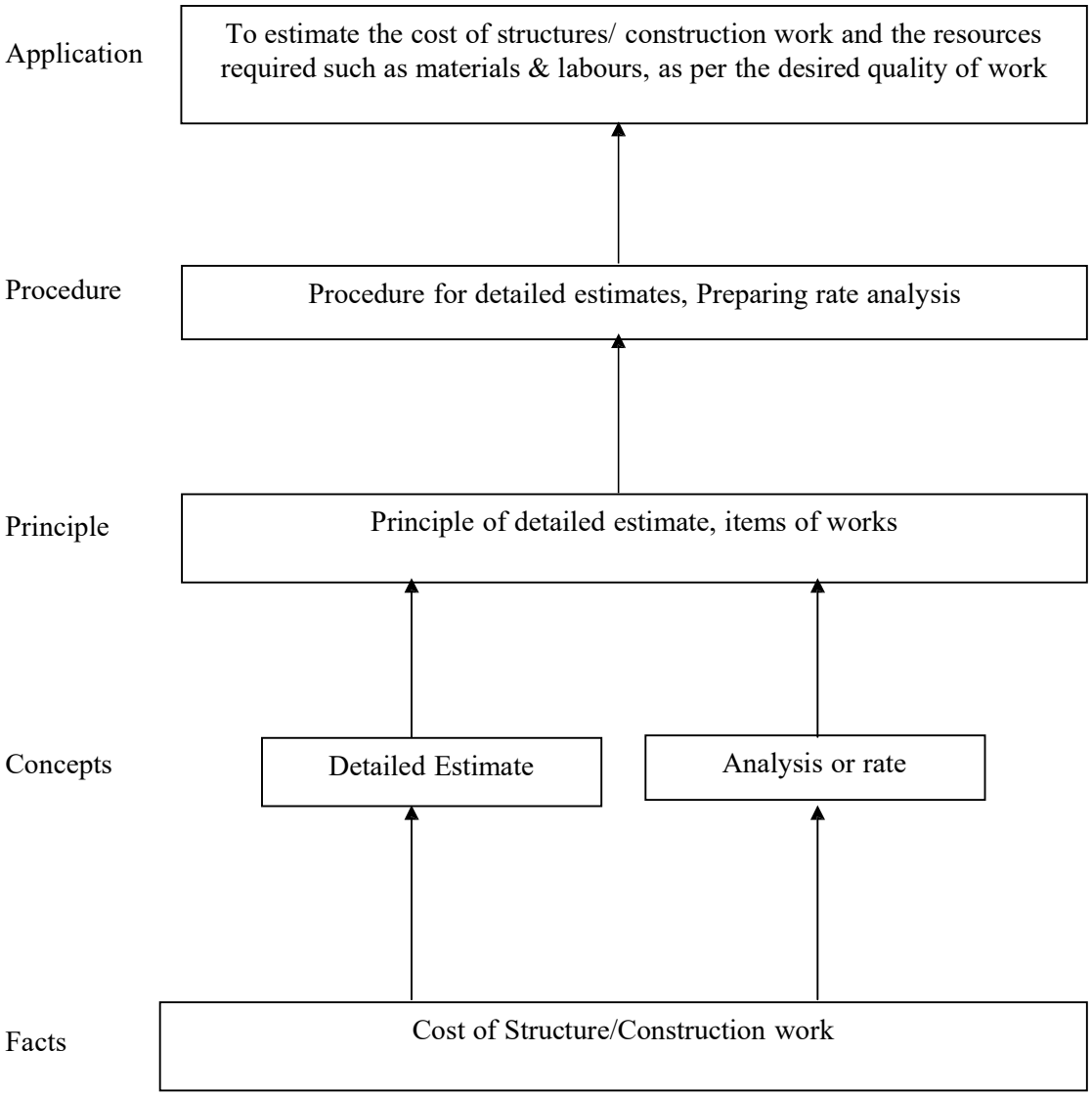
Here the students learn to prepare detailed estimate of R.C.C. framed structure.

Objectives:

The student will be able to:

1) Know different methods of taking out quantities
2) Prepare detailed estimate
3) Calculate materials required for construction works
4) Analyse the rate
5) Know concept of valuation

Learning Structure:



Contents: Theory

Chapter	Name of the Topic	Hours	Marks
1	**Procedure for preparing detailed Estimates** 1.1 Procedure for taking out quantities for various items of works 1.1.1 Concept of taking out quantities 1.1.2 General principles of taking out quantities 1.1.3 Methods of taking out quantities: a) Long wall & Short wall method b) Center line methods 1.1.4 Taking out quantities for R.C.C. structural members such as column footing, columns, beams ,slab and steel reinforcement 1.2 Entering the quantities of items of work in standard measurement sheet. 1.3 Abstracting in standard abstract sheet 1.4 Provision in detailed estimates for contingencies, work charged establishment, water supply & drainage works, electrification and quality control 1.5 Check list for building items 1.6 Provisional Sum, Prime cost 1.7 Taking out quantities of civil works of load bearing structure 1.8 Taking out quantities of civil works of R.C.C. framed structure	18	30
2	**Rate Analysis** 2.1 Meaning of the term rate analysis 2.2 factors affecting cost of an items of work 2.2.1 Major factors 2.2.2 Minor factors 2.3 Definition of task work 2.4 Factors affecting task work 2.5 Task work values for different items of work 2.6 Vehicles for transporting construction materials & their capacities & transportation charges 2.7 Quantity of materials required for different items of work 2.8 Analysis of rates for some of the important items of civil and architectural works 2.9 Definition & use of Schedule of Rates	10	16
3	**Valuation** 3.1 Definition and purpose of valuation 3.2 Definition of cost, Price and value and difference between them 3.3 Types of values – Book value, scrap value, salvage value, rateable value 3.4 Definition of depreciation, obsolescence & sinking fund	04	04
	Total	**32**	**50**

Practical:
Skills to be developed:

Intellectual Skills:
1) Interpretation & reading of drawings
2) Decide procedure for estimating
3) Identify items of work
4) Identify method of taking out quantities

Motor Skills:
1) Prepare detailed estimate
2) Prepare analysis of rate
3) Calculate material requirement for different items of work.
4) Calculate labour requirement

List of Practical:
1) Taking out quantities for load bearing wall structure using long wall, short wall, & Centerline method.
2) Taking out quantities of steel reinforcement from the given structural design and drawing.
3) Preparing detailed estimate of small R.C.C. framed structure for the project done in Architectural Design – I or advance working drawings or drawing for the above estimate should be provided to the students.
4) Preparing analysis of rate for any five items of civil/ architectural works.

Note:
Plans/drawings for the estimate are to be furnished by the institution. These plans must vary from semester to semester.

Learning Resources:
Books:

Sr. No.	Author	Title	Edition	Year of Publication	Publisher & Address
1	B.N.Dutta	Estimating & costing	23rd	Second Reprint 1991	S.S.Dutta & Co. Lukhnow
2	S.C.Rangwala	Elements of Estimating & Costing	5th	1982	Charotar Publishing House Ltd., Anand
3	G.S.Birde	Estimating & Costing	4th	1998	Dhanpatrai & sons, New Delhi
4	M.Chakrborty	Estimating & Costing	9th	1987	M.Chakraborty, Calcutta
5	B.S.Patil	Civil Engineering Contracts and Estimates	1st	Reprint 1983	Orient Longman, mumbai

Course Name : Diploma in Architectural Assistantship

Course Code : AA

Semester : Sixth

Subject Title : Acoustics & Climatology

Subject Code : 12637

Teaching & Examination Scheme:

Teaching Scheme			Examination Scheme					
TH	TU	PR	PAPER HRS.	TH	PR	OR	TW	TOTAL
03	--	--	03	100	--	--	--	100

NOTE:

- **Two tests each of 25 marks to be conducted as per the schedule given by SBTE.**
- **Total of tests marks for all theory subjects are to be converted out of 50 and to be entered in mark sheet under the head Sessional Work. (SW)**

Rationale:

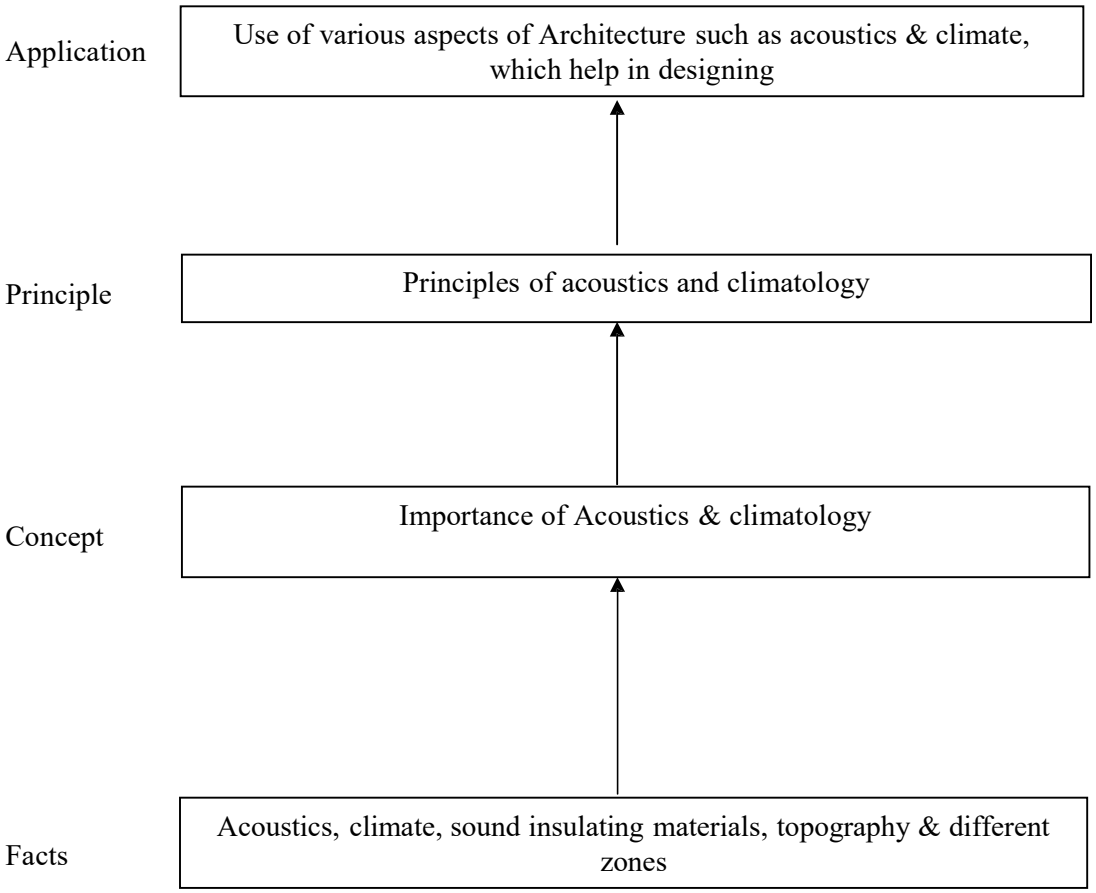
To make student aware of acoustics and climatology study. The various aspects of acoustics and climate related to designing of building.

Objectives:

The student will be able to: -

1) Know the various aspects involved in designing related to climate & acoustics.
2) Select appropriate materials for better acoustical treatment.
3) Design buildings as per climatic conditions

Learning Structure:



Contents: Theory

Chapter	Name of the Topic	Hours	Marks
1	**Acoustics** 1.1 Properties of Sound 1.2 Sound behavior in enclosed spaces. 1.3 Unit measurement of different properties of sound 1.4 Reverberation, absorption, reflection and resonance insulation: Definition, Meaning of the terms, effect on building material 1.5 Acoustical defects 1.6 Principles of Acoustics 1.7 Acoustical problems in multistoried building, statement of problems and suggested solutions. 1.8 Principle of sound amplification and distribution 1.9 Acoustical materials: their properties and uses.	16	40
2	**Climate** 2.1 Concept and definition of climate, Orientation of buildings based on climate 2.2 Elements of climate(Humidity, Sky conditions, incoming and outgoing radiation, rainfall and its distribution, air movements and special features such as trade winds, thunder storms, dust storms and hurricanes) effect of elements on surroundings / building construction 2.3 Climate in different Region at different altitudes and latitudes 2.4 Macro and micro climate:definition 2.5 Definition of Heat gain, heat loss and its effect on building materials 2.6 Wind movement around building 2.7 Heat transfer through conductance, convection, Radiation and cavities. 2.8 Thermal comfort: Definition 2.9 Relation of relative humidity, wind and temperature to thermal comfort 2.10 Energy efficiency: Definition and its importance 2.11 Energy Audit: Definition and its importance	16	40
3	**Effect of climate and topography on environment** 3.1 Study of effect of landscape elements and Topography on climate. 3.2 Study of shading effect of trees and vegetation on environment and climate 3.3 Study of effect of topography, air and wind on high and low rise building 3.4 Effect of climate on building material 3.5 Tropical climate 3.5.1 Different zones. 3.5.2. Architectural characteristics of different Zone	16	20
	Total	**48**	**100**

Note:

Mathematical Calculations are not required

Learning Resources:
Books:

Sr. No.	Author	Title	Publisher & Address
1	Dr.D.C.Punmia	A Text Book of building construction	Jyoti Prakashan
2	Bindra & Arora	Building Construction	Dhanpatrai & sons, Delhi
3	J.E. Olgay & Olgay	Climate & Architecture	J.E. Olgay & Olgay
4	David Egan	Concept of Architectural Acoustics	--

Course Name : Diploma in Architectural Assistantship

Course Code : AA

Semester : Fifth

Subject Title : Advanced Working Drawing

Subject Code : 12638

Teaching & Examination Scheme:

Teaching Scheme			Examination Scheme					
TH	TU	PR	PAPER HRS.	TH	PR	OR	TW	TOTAL
--	--	04	--	--	--	50#	25@	75

Rationale:

This subject shall give the student an in depth knowledge of the methodology of preparation of working drawings and details to enable the site staff in transforming the architects concept in to reality.

Objectives:

The student will be able to: -

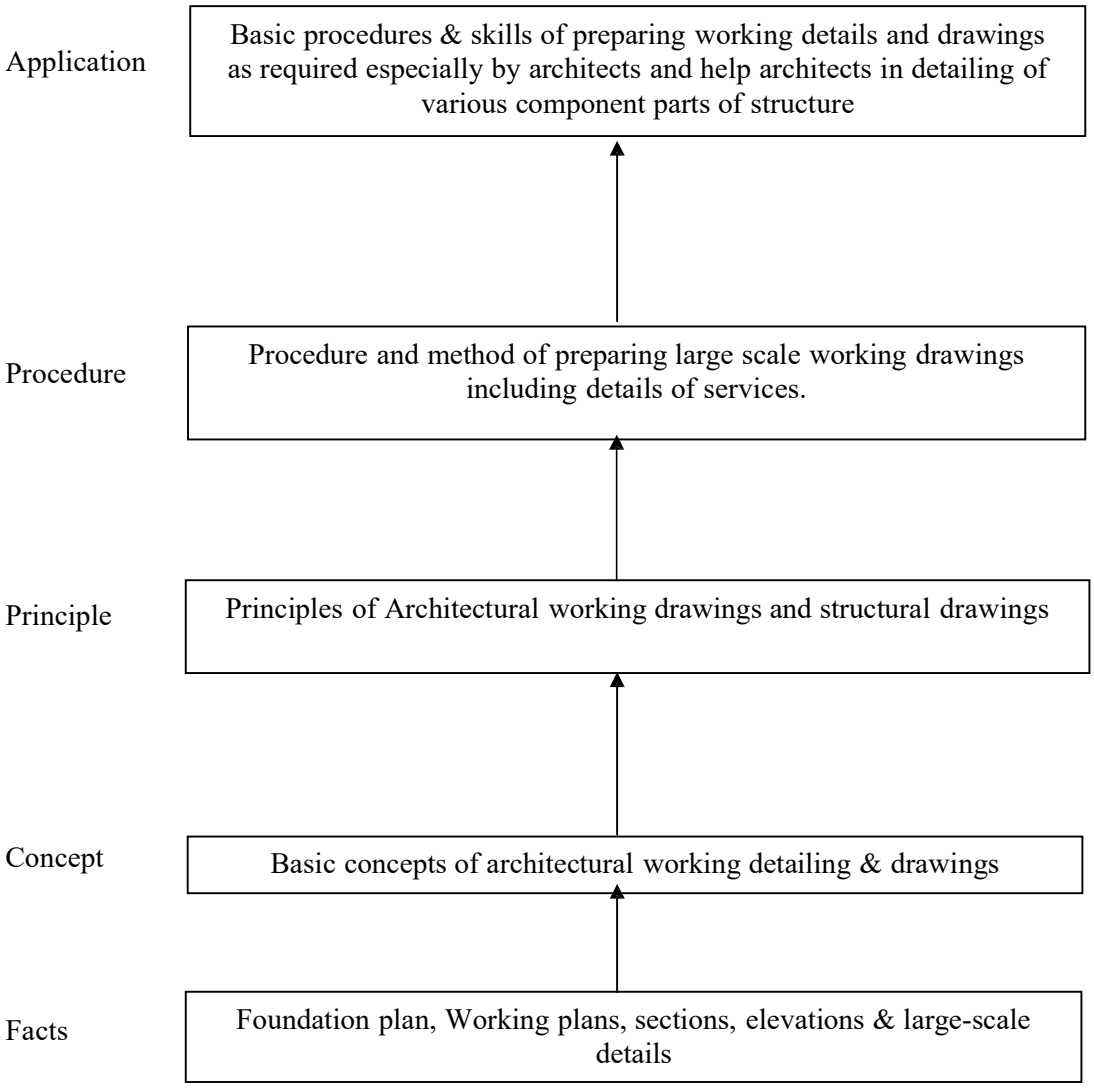
i) Attain basic skill and in depth knowledge of the preparation of working drawings.

ii) Prepare working drawings of small multi storied R.C.C. framed structures.

iii) Select different materials to be used for construction.

iv) Draw working details of complex architectural elements.

Learning structure:



Contents: Theory

Note: Contents of theory are to be taught in practical period

Chapter	Name of the Topic
1	**Preparing working drawings of R.C.C. framed structures** 1.1 Concept of center line plan/ foundation plan 1.2 Preparing center line plan of building from plan and structural design and drawings 1.3 Preparing working plans of different floors, sections and elevations. 1.4 Preparing large scale working details of complex architectural elements

Practical:

Skills to be developed:

Intellectual Skills:

1) Identify and sheet scale for preparing working drawings.
2) Identify and select proper materials for construction
3) Identify and select colour scheme and shades of colour for different rooms
4) Read and interpret drawings.
5) Work out center-to-center distance between columns and cumulative centerline distances of columns.

Motor Skills:

1) Draw centerline plan/ foundation plan of R.C.C. framed structure.
2) Draw working plans, sections & elevations
3) Prepare schedule of finishing
4) Prepare large scale working details of complex architectural elements.
5) Prepare schedule of columns, footings and P.C.C. in Foundation.

List of Practical: -

1) Preparation of working drawings of simple two/three storied R.C.C. framed type structure Or Working drawings for one of the projects done in design (Architectural Design I/II) Practical.

Working drawings should include:

a) Center line plan/ foundation plan showing center line distances of columns, cumulative centers of columns and schedule of columns, footings & P.C.C. etc.
b) Working plans of different floors.
c) Working sections (at least two)
d) All side working elevations.
e) Large scale working details of staircase, doors, windows, toilet and cooking platform in kitchen.

List of Practice oriented projects:

1) Students should observe procedure of setting out building (R.C.C. framed type structure) from centerline plan.
2) Students should collect/study-working drawings of R.C.C. framed type structures from local architects firm & submit the report/drawings.

Note:

All the students should present certified Portfolio of working drawings (Term work) at the time of oral examination.

Learning Resources:

Books:

Sr. No.	Author	Title	Edition	Year of Publication	Publisher & Address
1	Shah, Kale, Patki	Building Drawing	4th	2002	Tata Mc-Grawhill Publishing Co.Ltd New Delhi
2	J.K.Mckay	Building Construction Vol I to IV	5th	1985	Longmans, London
3	Mitchell	Advanced Building Construction	15th	1976	Allied Publishers, Mumbai
4	Barry	Construction of Building Vol I to IV	4th	1980	E.L.B.S.London

Course Name : Diploma in Architectural Assistantship

Course Code : AA

Semester : Sixth

Subject Title : Field Practices

Subject Code : 12639

Teaching & Examination Scheme:

Teaching Scheme			Examination Scheme					
TH	TU	PR	PAPER HRS.	TH	PR	OR	TW	TOTAL
01	--	02	--	--	--	50@	--	50

Rationale:

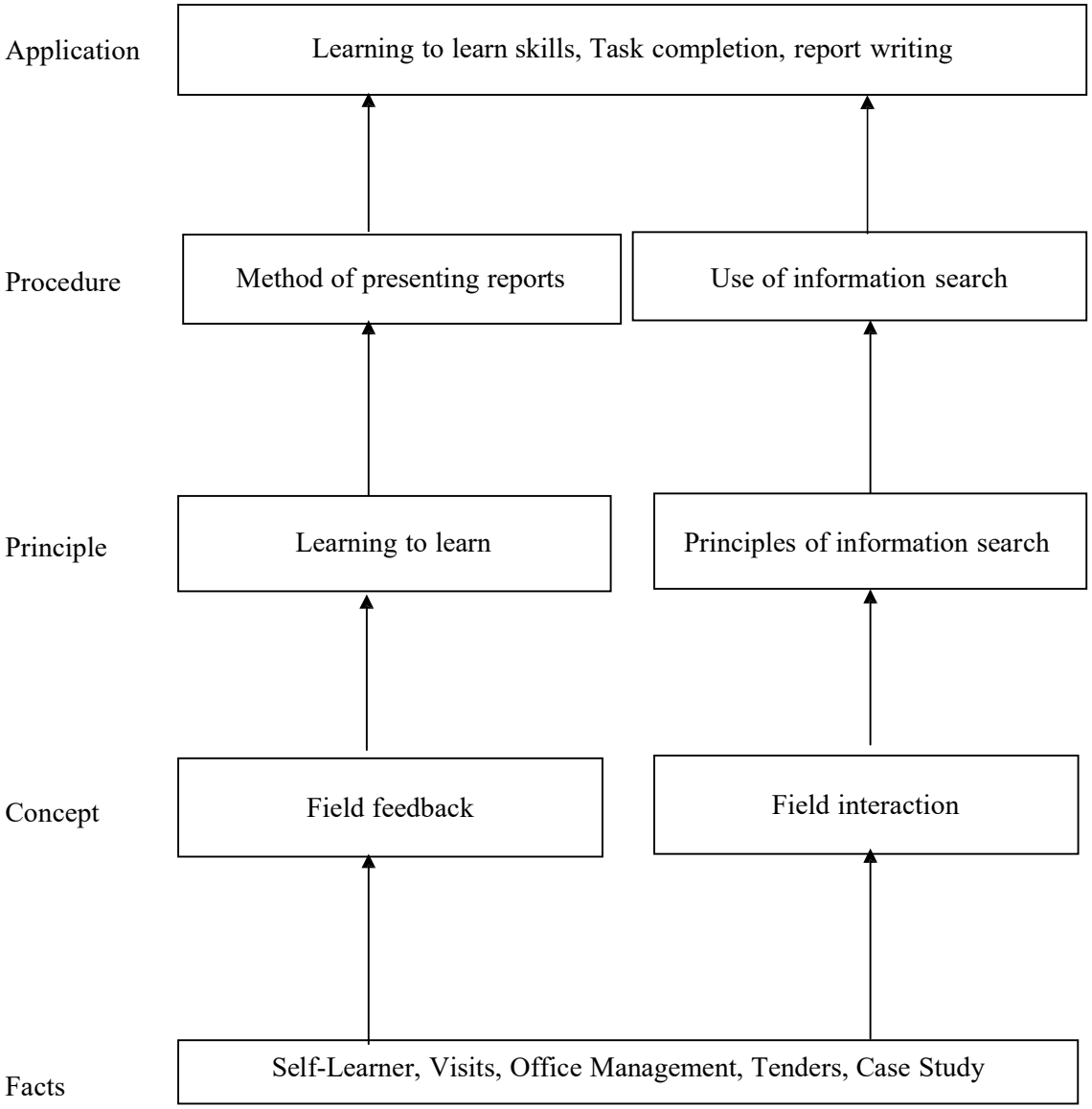
This subject is serving as basic introduction to the 'Field Practices' also. The student to embark on his professional carrier in any capacity to practice his profession efficiently and to know byelaws and regulation of various public authorities.

Objectives:

Student will able to: -

1) Interact with professionals
2) Build confidence to establish as Architectural Assistantship
3) Prepare project report.
4) Collect and use data

Learning Structure:



Contents: Theory

Chapter	Name of the Topic	Hours
1	**Architect's Office Procedure** 1.1 Office Administration 1.2 Filing 1.3 Recording of letters & Drawing 1.4 Modes of maintenance 1.5 Cash book 1.6 Bank transaction ledgers 1.7 Depreciation, Profit & loss statements 1.8 Modern office equipment Drafting machines & modern drawing equipments	04
2	**Tender documents up to 500 sq. mtrs. plot area** 2.1 Selection of project 2.2 Making Sketch plan 2.3 Preparation of Approximate Estimate 2.4 Preparation of tender documents	06
3	**Study & data collection of small scale industries** e.g. Green house, Poultries, Foundries, Workshops, Power looms, Oil mills, Press Shops, Petrol pumps, Tile manufacturing Factory, Cement pipe factory etc. Report should contain following points: 3.1 Selection of industry 3.2 Layout of Factory building with machinery Layout, sketches, photographs can be included 3.3 Services in the industries – Water supply, sanitation, Electricity, effluent disposal plant 3.4 Product handling procedure 3.6 Fire protection system 3.7 Bye laws and development control rules of state industrial estate & co – operative estates 3.8 Building material for factory building, fabrication, modern construction techniques, expansions etc.	06
	Total	**16**

Practical:
Skills to be developed:

Intellectual Skills:

1) Students get familiarized with actual procedure of Architect's office.
2) Decide the procedure of preparing Tender documents
3) Study of different small-scale industries.

Motor Skills:

1) Visit architect's office & submit visit report
2) Draw sketch plan
3) Prepare tender set.
4) Visit small scale industry and submit the report.

List of Practical:

1) Visit report of architect's office along with office layout.
2) Preparation of tender document.
3) Visit report of Small scale industry

Learning Resources:
Books:

Sr. No.	Author	Title	Publisher & Address
1	Dr. Roshan H. Namavati	Professional Practice	Mr.Anup Lakhani, Lakhani Book Depot, Mumbai
2	I.I.A	Handbook on Professional Practice	Indian Institute of Architects, Mumbai

Course Name : Diploma in Architectural Assistantship

Course Code : AA

Semester : Sixth

Subject Title : Computer Aided Drawing & Applications – II

Subject Code : 12725

Teaching & Examination Scheme:

Teaching Scheme			Examination Scheme					
TH	TU	PR	PAPER HRS.	TH	PR	OR	TW	TOTAL
--	--	04	--	--	--	50@	--	50

Rationale:

This subject intends to equip the students with throughout knowledge of application of computer in interiors & efficient working in 3D and 3D animation & Walk through.

Objectives:

The student will be able to: -

1) Convert the building plan in 3 dimensional view
2) Create different views
3) Show the circulation paths through animation
4) Show the various views of walk through

Learning Structure:

Application	Generating Walk throughs, 3D Animations and 3D Studio for Interior Design of Complex Nature
Procedure	Using features/tools/ functions of 3D animation, 3D studio
Principle	Principles of rendering, generating animation, using display and time commands
Facts	Basics of 3 D studio and generated views and 3 D features of views

Contents: Theory
Note: Contents of theory are to be taught in practical period

Chapter	Name of the Topic
1	**Applying Materials** 1.1 Using Material Editor 1.2 Material Colour Control 1.3 Material Property Control 1.4 Surface Colours 1.5 Mapping Shading Models
2	**Fixing Lights & Cameras** 2.1 Normal lights 2.2 Photometric Lights 2.3 Set the Sun from earth region 2.4 Adjust shadow and area of light 2.5 Study of different cameras 2.1 Create camera from view 2.2 Set the region interactive
3	**Walk Through 3d Animation** 3.1 Introduction to Animation 3.2 Animation – the Illusion Movement 3.3 Key Framer Commands 3.4 Selecting Geometry 3.5 Hierarchy/ Links/ Unlinks 3.6 Object Commands 3.7 Setting Animation Path 3.8 Path Constraints 3.9 Position Constraints 3.10Rendering Animation 3.11Display and Time Commands 3.12The Material Editor 3.13 Creating Self Materials 3.14 Introduction decomposing Architectural materials

Practical:
Skills to be developed:

Intellectual skills:
1) To know the basic 3D studio Max commands.
2) To know the basic colour schemes in 3 D studio Max
3) Introduction to the creation of path for Walk through
4) To create the illusion movement on the path

Motor Skills:
1) To develop the drawing model (building view)
2) To create the path for walk through
3) To design the various materials for application.
4) To create the Bird's Eye view for the given model (3D drawing)

List of Practical:

1) One simple project that clears the idea about a walk through is to be covered under the guidance of the subject teacher.
2) One main project is to be covered under the guidance of Subject teacher along with the Architectural Design – II subject teacher.

Note:

The students should study the subject according to the syllabus and complete their practical work under the guidance of the subject teacher. Further the students are expected to perform the practical work along with the guidelines provided by the Subject teacher of Architectural Design – II subject.

Learning Resources:
Books:

Sr. No.	Author	Title	Edition	Year of Publication	Publisher & address
1	Sham Titkoo	3D S Max for Animator, Interior Decorator & Architect	2nd	2006	Dramtas Press, 19/A, Ansari Road, Dariya Ganj ,New Delhi
2	Macromedia	Character animation & 3D S max Vol I to V	5th	1996	Aptech Publications