P1211   **[4067]-3002**

S.Y.M. Arch. (Architectural Conservation)
HISTORIC HOUSING AND LANDSCAPES
(Theory) (2008 Pattern) (Sem. - III) (713202)

Time : 3 Hours]   [*Max. Marks : 75*

Instructions to the candidates:

1) *Section- I and section- II have to be solved in separate sheets.*
2) *Question 5 from section- I is compulsory.*
3) *Answer any 2 questions from the remaining questions section- I and any 4 from section -II.*
4) *Figures to the right indicate full marks.*

SECTION - I

Q1) Critically analyze architectural conservation efforts at various levels for any city in western Maharashtra.   **[10]**

Q2) Explain merits and demerits of re-development approach of core city areas.
                                                                    [10]

Q3) Explain with annotated sketches, morphology of a typical historic housing area in a Maratha city/Indian city.   **[10]**

Q4) Explain housing transformation in the core city of Pune with respect to any two housing typologies.   **[10]**

Q5) Write short Notes (any 3):   **[15]**

    a) Listing of heritage structures.

    b) Elevation control rules.

    c) Physical infrastructure problems of inner city areas.

    d) Architectural character of *wadas* in Pune.

SECTION - II

Q6) Write short Notes (any 2): **[10]**

    a)   Sacred groves in India.

    b)   Cultural landscapes and its classification.

    c)   Documentation of historic gardens.

    d)   Mughal gardens.

Q7) Discuss the collective efforts at international front in conserving the historic landscapes. **[10]**

Q8) Present the overview of Asian gardens with uniqueness of Indian medieval landscapes. **[10]**

Q9) Discuss the Contribution of pre-Mughal dynasties in evolution of Islamic garden of India. **[10]**

Q10) Discuss the synthesis of native Indian and western concepts of historic landscapes. **[10]**

Q11) Discuss the collective efforts at international front in conserving the historic landscapes. **[10]**

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P1212   **[4067]-3003**

S.Y.M. Arch. (Environmental Architecture)
RENEWABLE ENERGY SYSTEMS & ENVIRONMENTAL TECHNOLOGIES
(713201) (Sem. - III) (2008 Pattern) (New)

Time : 3 Hours]   [*Max. Marks : 75*

Instructions to the candidates:
  1) *Question No. 1 and 4 are compulsory.*
  2) *Supplement your answers with graphs and figures wherever necessary.*
  3) *Draw diagrams wherever necessary.*

SECTION - I

Q1) Compulsory question.   **[25]**

Express in a stepwise manner how will you design and size the solar hot water system for an apartment, giving detailed calculations and diagrams wherever necessary.

The apartment features are as follows:

  a) The apartment is located in a high income residential neighborhood, consisting of 3 BHK flats, with 3 bathrooms each flat.

  b) There are 3 flats per floor and 7 floors in the building.

  c) The hot water is to be supplied to the kitchen, wash area and all bathrooms, accordingly assume the hot water requirement for the apartment.

  d) Calculate the terrace space available, assuming that each flat is averagely 1200 sq ft.

  e) Assume all other necessary details.

Q2) Write short notes on the following (Any Two):   **[5 Marks Each]**

  a) Nuclear Energy.

  b) Solar Photovoltaic Technology.

  c) Conventional Waste water treatment in Pune.

  d) Solid waste Management.

SECTION - II

Q3) Write notes on the following (any Two): **[5 Marks Each]**

    a) Biogas Plants.

    b) Wind Power generation.

    c) Root Zone treatment.

    d) OWC (Organic Waste Convertor)

Q4) Compulsory Question. **[30]**

As an Environmental consultant to a Developer for a township project, you have been asked to compile **a conceptual report** on the various Renewable Energy and Alternative Environmental Technologies that can become an integrated part of the township design and planning.

The township has the following features.

    a) The site area admeasures approx. 3,35,000 sq. mt and is located in outskirts of Bangalore, Karnataka.

    b) As per the EIA requirements, 30% of this land is to be maintained as Open area and needs to be developed/kept as Green Areas.

    c) The proposed built up is approx. 1,60,000 sq m. The residential units (flats) proposed are approx. 400, with three commercial IT buildings and one hotel, inviting around 3000 guests/employees in the township every day.

    The report should give a clear picture to the Developer as to the various Renewable Energy Technologies and Environmental Technologies that the township can integrate, with conceptual reference to feasibility of these systems. It is expected that simple calculations/ estimates/drawings/ diagrams become a part of this report.

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P1213　　　　　　**[4067]-3004**

S.Y.M. Arch. (Environmental Architecture)
EA-315 : ENVIRONMENTAL IMPACT ASSESSMENT
(713202) (2008 Course) (Sem. - III) (New)

Time : 3 Hours]　　　　　　　　　　　　　　　　[*Max. Marks : 75*

Instructions to the candidates:

1)　Question 1 and 3 are compulsory.

2)　Supplement the answers with sketches/diagrams as necessary.

SECTION - I

Q1)　Compulsory question.　　　　　　　　　　　　　　**[15]**

EIA is an important planning tool. Explain with the help of EIA cycle. Describe different methods of collection of Baseline Data in detail.

Q2)　Write short note on the following (Any **Three**):　　　**[10 Marks Each]**

a)　Expertise require for preparation of wholesome EIA report.

b)　Lavasa and EIA.

c)　Importance of EIA for construction industry.

d)　Eco-sensitive Zones and EIA.

e)　History of EIA process in India.

SECTION - II

Q3)　Compulsory question.　　　　　　　　　　　　　　**[25]**

EIA is an important step to complete the legislative mandates. Explain the social importance of 'Public Hearing' in decision making process.

OR

How will you identify the risks involved and select the mitigation measures for any EIA studies for 'Special Township' project?

P.T.O.

Q4) Write notes on the following (any two):   **[5 Marks Each]**

    a) State Environment Impact Assessment Authority (SEIAA) and State Environment Assessment Committee (SEAC).

    b) Penalty for violation of EIA mandates and Environment Management Committee.

    c) Methods of Environmental Monitoring.

    d) Mitigation Measures.

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P 1214   **[4067]-3006**

M. Arch. (Landscape Architecture)
LA 312 : ENVIRONMENTAL LEGISLATION AND ECONOMICS
(2008 Patten) (713302) (Sem. - III) (New)

Time : 3 Hours]   *[Max Marks : 75*

Instructions to the candidates :
   All Questions are compulsory.

SECTION-I

Q1) International Environmental Law is important to protect the wholesomeness of the Environment.   **[15]**

OR

Proper Land use planning can protect the Environmental resources in the Urban Areas.

Q2) The Indian Forest Act, 1972 gives the difference between Reserve Forests, Protected Forests and Village Forests. Explain with reference to the Forest policy, 1952.   **[15]**

OR

Explain the Powers and Functions under Water Act, 1974.

Q3) Short Notes (Any Two):   **[5 marks each.]**

   a)   EIA notification for Construction Industry.

   b)   United Nations Environment Program.

   c)   Wetland Notification.

   d)   Noise Pollution is one of the kinds of Air pollution.

SECTION-II

Q4) Wildlife Protection Act is important for the protection of critical Habitates by declaration of Sanctuaries and National Parks   **[10]**

OR

The biotic and a-biotic components are major contributors in the economic development of the nation.

Q5) Bio medical waste management has become the important issue in Waste Management. Explain with the help of Bio Medical Waste Management Rules of 1998 and Draft Waste Management Rules. **[10]**

<p align="center">OR</p>

Constitution of India plays an important role in protection of Environmental Rights.

Q6) Short Notes (Any Three):   **[5 marks each.]**

    a)   Bio-accumulation and bio-magnification.

    b)   Eco-sensitive Zones.

    c)   Clean Development Mechanism.

    d)   World Heritage Site and economics.

    e)   73rd and 74th Constitutional amendment.

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P 506   **[4067] - 41**

Fourth Year B. Arch.
ARCHITECTURAL DESIGN - IV
(413443) (Yearly Pattern) (2004 Course)

Time : 18 Hours]   *[Max Marks : 100*

Instructions to the candidates :

1) *Your design solution will be evaluated as a whole.*

2) *Assume suitable data if necessary.*

3) *Single line sketch plans of the entire scheme with the site to the required scale shall be submitted by the candidates at the end of the first day. These drawings shall not be returned to the candidates, therefore due record should be kept for subsequent days. The candidate shall not make any considerable departure from the sketch design submitted on the first day.*

4) *The drawings should be self-explanatory with structural scheme, clarity in all plans and sections. Skill of drafting should have language of architecture.*

A Housing Complex at Kolhapur

A reputed promoter and builder has purchased a plot of land admeasuring 16,000 Sq. Meter in suburban area of Kolhapur City. The plot is rectangular, 160 meters in east-west and 100 meters in north-south direction. Plot has 1:100 slope towards east. The plot is surrounded by residential area and has 30-meter wide road on west side. Modern living environment conducive for social interaction is their prime requirement. You have to design this 'Housing Complex' as per the following requirements.

The space requirements

Built-up areas of Dwelling Units is as follows:

Type	Area	Total No. Of Units
A	65	40
B	90	80
C	115	40

Parking

Four wheelers	80
Two wheelers	100

P.T.O.

Design Requirements:

1) 10% of the area is to be reserved as open space. Floor Space of open space is not available for construction. However, a 'Club House' of maximum 150 Sq. Meters and max. 6.0 Meter height can be provided free of FSI in the Open Space. You have to show only outline of the 'Club House'. Assume requirements of 'Club House'.

2) Floor space of area of internal roads is available for construction.

3) Side margins:

    a) Min 4.5 M from internal and external roads.

    b) Min 3.0 M from plot boundary or (H/2)-3 M, whichever is larger.

    c) Distance between two buildings/wings min. 6.0 M. And (H/2)-3 M. H = Height of building.

    d) Side margins from plot boundary will be minimum (H/2)-3 M. It can be maximum 7.50 M.

4) Permissible FSI is One.

5) Max. Permissible height is 24.00 M.

6) U. G. Tank, Security Cabin, D.G. Set, compost plant should be provided at convenient locations.

7) Areas free of FSI.

    a) Balconies: to the extent of 15% of floor area.
    b) Staircase: width of flight should be 1.2 M.

    c) Stilt Floor.

    d) Passages: to the extent of 5% of floor area.

    e) Basement: constructed with in the area left of side margins.

8) All other requirements of 'National Building Code' should be followed.

Drawings Required:

First Day: Scale

i)   Layout Plan showing site, buildings, parking,

     driveways, pathways, landscaping, etc.   1:500

ii) Single line plans of clusters at all levels   1:100

Final Day:

i)   Layout plan showing site, buildings parking,

     driveways, pathways, landscaping, etc.   1:500

ii) Plans of clusters at all levels

     Furniture layout should be shown in Typical Units   1:100

iii) Minimum 2 sections to explain the scheme.   1:100

iv) Minimum 2 elevations.   1.100

v)   A sketch perspective of bird's eye-view.

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P 507   **[4067] - 42**

Fourth Year B. Arch.
BUILDING CONSTRUCTION & MATERIALS - IV
(Yearly Pattern) (2004 Course) (413444)

Time : 3 Hours]   *[Max Marks : 100*

Instructions to the candidates :

1)   *Answers to the TWO SECTIONS should be written in SEPARATE BOOKS.*

2)   *Neat diagrams must be drawn wherever necessary.*

3)   *Assume suitable data if required.*

4)   *All questions are compulsory.*

SECTION-I

Q1) Answer ANY TWO of the following.

a)   An Industrial shed of size 18 m x 36 m is to be constructed. Diffused natural light is required to be provided for the same. The minimum height of working space required for the shed is 6 m. Draw plan and section to a scale of 1:200 for appropriate roofing system and draw details of natural lighting, ventilation and rain water drainage to any appropriate scale.   **[25]**

b)   A swimming pool is to be constructed in a housing complex of size 10mX 16m. Draw a plan and section to a scale of 1:100, and give details of overflow system, to any appropriate scale.   **[25]**

c)   Draw to a scale of 1:50 a part plan and section of a tiered seating for a stadium showing all the structural elements and access staircase. **[25]**

d)   Give sectional details for any three types of roads showing the necessary surface water drainage, footpaths etc. to be provided in a township.   **[25]**

SECTION-II

Q2) Write short notes on ANY FIVE with neat sketches.   **[50]**

a)   Two types of expansion joints for slabs and beams.

b)   Any one system of curtain walling.

c)   Explain with neat sketches any two structural systems used in high rise buildings.

P.T.O.

d)   RCC north light barrel vault.

e)   Construction of diaphragm retaining walls for multi basements.

f)   A skimmer unit detail for a swimming pool.

g)   Hyperbolic Parabolides.

h)   Rectangular and diagonal grid coffered slab.

i)   Raking and flying shores.

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P 508   **[4067] - 51**

Fifth Year B. Arch.
PROFESSIONAL PRACTICE (501)
(Yearly Pattern)

Time : 3 Hours]   *[Max Marks : 100*

Instructions to the candidates :

    1)   *Question 1 & 6 are compulsory.*

    2)   *Solve any 3 out of remaining questions in section I & any 3 out of remaining questions in section II.*

    3)   *Answers to two sections should be written in separate books.*

    4)   *Figures to the right indicate full marks.*

SECTION-I

Q1) Write short notes (any 4):   **[20]**

    a)   Types of architectural practices.

    b)   Office drawings documentation.

    c)   Stage wise mode of payment.

    d)   Architectural competitions.

    e)   Value, Price & cost.

    f)   Easement rights.

Q2) Discuss why architectural practice is profession & not a trade or business.**[10]**

Q3) How to secure clientele in architectural practice ?   **[10]**

Q4) What is role of ‖Ain architectural professional practice ?   **[10]**

Q5) Does the following incident fits with code of conduct ? (Answer in yes/no)   **[10]**

    a)   Promoter's relatives take part in architecture competition.

    b)   Name plate of an architect is displayed for the entire building as a poster.

    c)   Architect advertises about his services on television.

P.T.O.

d) Children's under 14 are employed at site for light work.

e) Architect submits completion certificate when building is not complete.

f) Architect appoints contractor for the work & informs client later.

g) Architect accepts to work for project where another architect is already employed.

h) Architect receives fees in cash to avoid paying taxes.

i) Architect issues interim certificate without visiting site.

j) Architect approves changes of material without informing owner.

SECTION-II

Q6) Write short notes (any 4):   **[20]**

a) Earnest Money Deposit (EMD).

b) Advantages of Arbitration.

c) Steps for calling tenders.

d) Ineffective tender.

e) Claiming extra charges for work.

f) Site visit inspection.

Q7) Differentiate between item rate & lump sum rate tender.   **[10]**

Q8) Describe on tender notice contents to be advertised in news paper.   **[10]**

Q9) Elaborate on contents of contract document & drawings.   **[10]**

Q10) Fill in the blanks.   **[10]**

a) ------- (Nominated/Preferred) subcontractor is appointed by the owner.

b) ------- (Patent/Latent) defect is found out after execution of work.

c) ------- (Higher/Lower) tender is accepted for demolition work.

d) ------- (Item rate/Lump sum) tender gives total cost of work with or without cost of individual items.

e) Defects Liability Period is usually -------- (12/24) months after virtual completion.

f) A person having ------- (servient/dominant) is at a disadvantage in case of easement.

g) Fire insurance is calculated on ------- (10%/90%) of valuation of building.

h) Arbitration proceedings are carried out in -------- (private/public).

i) Owner ------- (can / cannot) accept highest quotation received for work.

j) Cleark of work (COW) -------- (is/is not) authorized to approve or reject the building material at site.

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P1222

[4067]-3005

M. Architecture (Landscape Arch.)
LANDSCAPE CONSERVATION
(2008 Pattern) (713301) (Sem. - III)

Time : 3 Hours]   *[Max. Marks : 75*

Instructions to the candidates:

1) *Q.No. 1 and Q. No. 5 are compulsory.*
2) *Out of remaining in Section - I solve any two and in Section - II solve any two.*
3) *Neat sketches must be drawn wherever necessary.*
4) *Section - I 40 marks and Section - II 35 marks.*
5) *Answer questions of each section in <u>separate</u> answer books.*

<u>SECTION - I</u>

Q1) Write a short note on conservation of natural resources and traditional practices of conservation followed in India. **[20]**

Q2) Write a brief note on Cultural Landscapes of India. **[10]**

Q3) Write a short note on (<u>Any 2</u>): **[10]**

     a)   Public participation in landscape conservation projects.

     b)   Sustainability.

     c)   Lakes in India.

Q4) Explain Biodiversity and hotspots and write in brief about the biodiversity scenario in India. **[10]**

<u>SECTION - II</u>

Q5) Explain various non-conventional energy resources and their integration in landscape design or planning. **[15]**

Q6) Explain significance and scope of Landscape conservation in today's context. **[10]**

Q7) Write a short note on International policies related to landscape conservation. **[10]**

Q8) What are degraded landscapes and role of landscape architect in environmental restoration with suitable examples. **[10]**

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P502

T.Y. B.Arch.

ARCHITECTURAL DESIGN - III

(2004 Course) (yearly Pattern) (313435)

Time :12 Hours]Enlodge 6 hours]   *[Max. Marks :100*

Instructions to the candidates:-

1) *The design will be valued as a whole.*

2) *Assume suitable data if necessary.*

3) *The candidate will submit the single line drawings of the site layout, floor plans and section at 1:200 at the end of the first day. These sketches shall not be returned to the candidate, therefore due record should be kept for reference on the subsequent day. Candidates should refrain from making serious deviations from sketches submitted on the first day.*

4) *The drawing should be self explanatory with structural, clarity in drawings.*

5) *Orientation of the site should not be changed while preparing the floor plans.*

Corporate Office Building

A reputed company desires to set up its Headquarters amidst the hustle and bustle of the city environs with a staff requirement of about 90 persons.

The client is looking for a built form that would address the concerns of energy efficiency by using passive design measures.

Design Brief-

Sr. No.	Particulars		Area
1	**Waiting and Reception**		80 sq. m
2	**Administration**		
	a)	CEO Cabin	25 sq. m
	b)	Secretary cabin	15 sq. m
	c)	Audiovisual (2 × 45 Sq. m)	90 sq. m
			130 sq. m

3	**Department heads**	
	a) Accounts	15 sq. m
	b) Human Resource department	20 sq. m
	c) Purchase	15 sq. m
	d) Marketing	20 sq. m
		70 Sq. m
4	**Office areas:**	
	a) Accounts department with store	80 sq. m
	b) Stores and purchases	60 sq. m
	c) Marketing and customer care	40 sq. m
		180 sq. m
5	**Work stations:**	
	a) Project leaders (07 × 10 Sq. m)	70 sq. m
	b) Assistants (07 × 05 Sq. m)	35 sq. m
	c) Workstation for 75 persons	400 sq. m
		505 sq. m
6	**Recreation:**	
	a) Canteen	
	1) Indoor	70 sq. m
	2) Outdoor	85 sq. m
	3) Kitchen	30 sq. m
	b) Gymnasium	100 sq. m
	c) Indoor Games	40 sq. m
		240+85 sq. m
7	**Service Core** Male Toilet: 3 WC, 3 UR, 3 WHB Female Toilet: 3 WC, 3 WHB Lift 1600 X 1600 mm Electrical Room: 10 Sq. m HVAC Room: 15 Sq. m 2 Staircases, Flight width 1500 mm Pantry 10 Sq. m	
8	**Parking:**	20 Cars, 50 nos. 2 wheelers

Site parameters:

Plot Size	50 M. × 70.00 M.
Plot area	3500.00 Sq. Mt
Set back from Road	Front: 9.00 M, Side setback: 6.0 m
Height Permissible	16.0 M
Maximum ground coverage	35% of plot area
Basement Line	Till the setback line
Permissible F.S.I.	1.00

Drawing requirements:

1) Site Plan 1 :200

2) All floor plans 1: 1 00

3) Two sections minimum 1:100

4) Two elevations minimum 1:100

5) A perspective sketch of the building

OFFICE BUILDING

9 M WIDE ROAD

50000

70000

6000

6000

6000

9000

R9000

18 M WIDE ROAD

SITE

N

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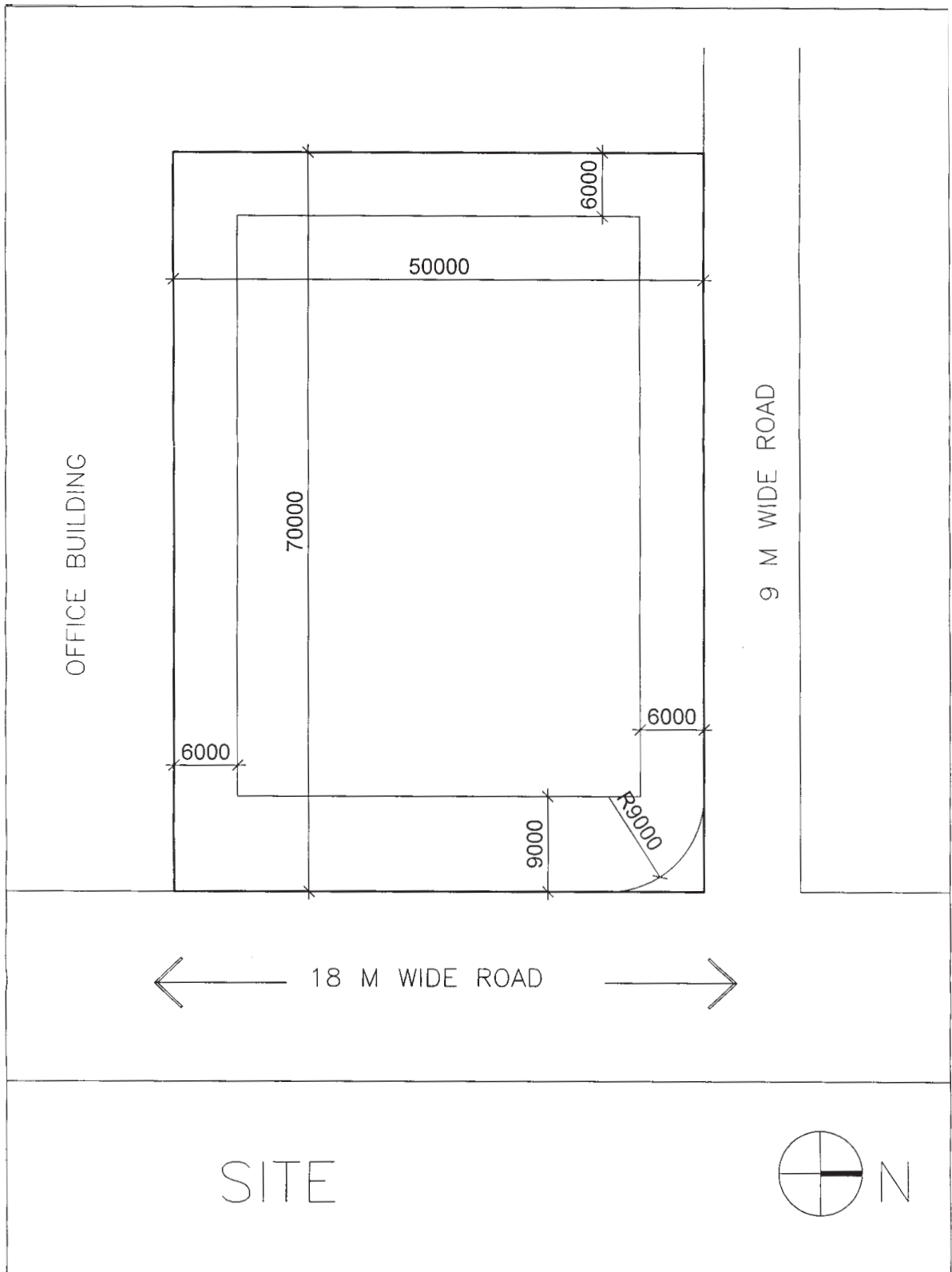
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[4067] - 32

T.Y. B.Arch.

BUILDING CONSTRUCTION & MATERIALS - III
(Yearly 2004 Pattern) (313436)

Time : 3 Hours]   *[Max. Marks :100*

Instructions to the candidates:-

    1)   *Answer two questions from Q.1 to 3 and Q. 4 & 5 is compulsory.*

    2)   *Answers to section I and section II should be written in two separate answer sheets.*

    3)   *Neat diagrams must be drawn wherever necessary.*

    4)   *Assume suitable data if necessary.*

SECTION - I

Q1) a)   Draw plan, elevation & section of straight Sliding door For an opening 2400mm × 2100mm between living room and dining room to the scale of 1: 10.   **[20]**

     b)   Draw detail at bottom and top explaining the sliding mechanism to a scale 1:5.   **[10]**

Q2) a)   Draw plan & section showing Reinforcement detail of half flight staircase of flight width of 1200mm and floor height of 3050mm to the scale 1: 1 0   **[15]**

     b)   Draw details Reinforcement of waist slab to the scale 1:5.   **[10]**

     c)   Draw detail at landing with railing fixing detail.   **[5]**

Q3) Draw sketches and explain in detail (Any three):   **[30]**

     a)   Channel roofing systems by C.B.R.I.

     b)   Advantages of Reinforced brick work.

     c)   Explain castellated beam.

     d)   Terminology of mass/gravity Retaining wall.

     e)   Bay window and its details.

P.T.O

SECTION - II

Q4) Explain through sketches (Any three): **[15]**

    a)   Decorative brick-work.

    b)   Spine beam and castellated beam.

    c)   Pile and raft foundation.

    d)   Internal tanking and external tanking.

    e)   Folded plate as long span structure.

Q5) Write short notes (Any five): **[25]**

    a)   Exterior stone cladding.

    b)   Cement based water proofing.

    c)   Uses of stainless steel in building industry.

    d)   Applications of guniting.

    e)   Explain The method of painting for steel fabrication?

    f)   Glass block partitions used in building

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P504

[4067] - 34

T.Y. B.Arch.

BUILDING SCIENCE & SERVICES   - II

(Yearly Pattern) (2004 Course) (313439)

Time : 3 Hours]   *[Max. Marks :100*

Instructions to the candidates:-

1) *Answers to the Two Sections should be written in separate books.*

2) *Neat diagrams must be drawn wherever necessary.*

3) *All questions are Compulsory.*

4) *Figures to the right indicate full marks.*

SECTION - I

Q1) Answer any two questions of the following: **[2 × 15 = 30]**

a) Explain with sketches stack effect and reverse stack effect in Natural ventilation system.

b) What are the different types of filters used in air-conditioning system? Explain with sketches.

c) Explain working of Centrifugal fans and Axial Flow Fans used in Mechanical ventilation system? Draw sketches wherever necessary.

Q2) Write short notes of the following (draw sketches wherever necessary) (Any Four):   **[4 × 5 = 20]**

a) Evaporator

b) Plenum system of mechanical ventilation

c) Air-cooled condensers

d) Fan Coil Unit

e) Cooling Tower

SECTION - II

Q3) Answer any two questions of the following: **[2 × 15 = 30]**

    a)   Explain briefly defects of sound with the help of neat sketches.

    b)   Explain air-borne noise and methods of controlling the same.

    c)   State Sabine's Formula for finding reverberation time. Explain the importance of reverberation time in achieving good hearing condition in a room.

Q4) Write short notes of the following (draw sketches wherever necessary) (Any Four): **[4 × 5 = 20]**

    a)   Smoke detector

    b)   Sprinkler system

    c)   Fire Escape Lift

    d)   Wet and Dry Risers

    e)   Portable fire extinguishers

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P 505   **[4067] - 35**

T.Y. B.Arch.

QUANTITY SURVEYING & SPECIFICATION WRITING
(Yearly Pattern) (313440) (2004 Course)

Time : 3 Hours]   *[Max. Marks :100*

Instructions to the candidates:-

1) *Answers to the two sections should be written in separate books.*
2) *Neat diagrams should be drawn wherever necessary.*
3) *Figures to the right indicate full marks.*
4) *Use of logarithmic tables, slide rules, Mollier Charts, electronic pocket calculators and steam tables is allowed.*
5) *Assume suitable data where necessary.*
6) *All questions are compulsory.*

SECTION - I

Q1) a) Work out the quantities for the following items of work based on the details given in the accompanying diagram (Fig 1) (any Five)   **[25]**

i) M 20 Column Footings

ii) M 20 Plinth beams (Below all walls)

iii) P/F M.S. Fully glazed windows & ventilators

iv) C.C. T.W. Door Frames (125 × 65) for D1D2D3

v) Neero Plaster (1:4) to Master bed walls (Internally)

vi) Ceramic tile dado (2.1 Mtrs ht) to Master bed toilet

vii) Polished Kotah Treads to entrance & ground floor stair steps.

viii) P/F 100 dia C.I. Nahani Traps

Schedule of Doors/Windows Openings

D1 - 1000 × 2100   D2 - 900 × 2100   D3 - 800 × 2100

Wl - 1500 × 1200   W2 - 1000 × 1200   W3 - 1500 × 900

W4 - 700 × 700   W5 - 900 × 900

R.C.C Details - All footings 1200 × 1200 (D = 600 & d = 200)

All Columns - 230 × 460, All Floor slabs 140 mm thk, All Plinth Beams 230 × 450.

b) State the rules for deductions for Doors, Windows / Openings from plastering & addition for jambs as per I.S.1200 **[5]**

Q2) Write short Notes on (Any Two): **[10]**

a) Uses of Detailed Estimates

b) Contingencies

c) Spot Items

d) Built up Area Method

Q3) Work out the "Unit Rate" for P.C.C. (1:3:6) floor sub base **[10]**

Assume - Aggregates Rs 700/Cu. Mtrs Sand - Rs 1750/cumtrs

Cement - Rs 280/bag labour - Rs 700/Cu.mtr

Q4) Describe the items of work as described in the Bill of Quantities stating the units of measurement (Any Two): **[10]**

a) 900 × 450 Inspection Chamber

b) P/F. 110 mm thk Burnt brick Masonry in C.M. (1:4)

c) P/F. Wash hand basin

SECTION - II

Q5) Describe the relation between Specification writing & working drawings. What are the types of specifications? Discuss anyone type in detail giving a example. **[10]**

Q6) Write Detailed specifications for (Any Two): **[10]**

a) R.C.C. Slab

b) Excavation in hard murum

c) 230 mm thk brick wall

d) Vitrified Tile flooring

Q7) Write material specifications for (any two): [10]

 a) Bricks

 b) Timber

 c) Stone

 d) Cement

 e) Fine aggregate

Q8) Write short notes on (any two): [10]

 a) Mode of measurements

 b) Storage of cement

 c) Slump test

 d) Ferrule Connection

GROUND FLOOR PLAN

TOILET 1570X2750

MASTER BEDROOM 5060X3350

BEDROOM 5060X3350

TOILET 1570X1770

VERANDAH 3500X2050

KITCHEN 4060X3240

LIVING ROOM 6850X3650

CONCRETE GRILL

UP T=250 R=160

TYPICAL SECTION

Grd.Lvl.

Plinth beam 230x450 (450)

100 mm P.C.C. (1:3:6)

Bk bat coba W/P

100 mm thk P.C.C. coping

14320   7010   4290   3020

11140   8860

P 815   **[4067] - 33**

T.Y. B.Arch.
THEORY OF STRUCTURES - III
(2003 Yearly Pattern) (313437)

Time : 3 Hours]   *[Max. Marks :100*

Instructions to the candidates:-
1) Answer any 3 questions from each section.
2) Answer should be written in separate answer books.
3) Neat diagrams must be drawn wherever necessary.
4) Figures to the right indicate full marks.
5) Use of non programmable calculators and steel tables allowed.
6) Assume suitable data if necessary.
7) Use Fe 415 steel and M 20 grade concrete

SECTION - I

Q1) Write short notes on any four: **[16]**
 a) Problems of foundations in black cotton soil.
 b) Piles, Need and Different Kinds Of Piles
 c) Counter Fort retaining wall and structural detailing for same
 d) Different Kinds of structural support systems for staircases
 e) An Intze Water tank, Structural detailing of the same.
 f) What is S.B.C and give values of S.B.C for different kinds of soil.

Q2) Design an isolated footing for a rectangular column of size 230×600 subjected to a load of 600 Kn. S.B.C = 250 Kn/sq m.
 Design for depth, Design the steel and check for one way shear.   **[17]**

Q3) Design a RCC doglegged staircase for an office building for the following data   **[17]**
 a) Width of the flight 1500
 b) Floor to floor height - 3200 mm
 c) Tread - 300 mm
 d) The staircase is supported on 230 mm wide beams on outer edges of landings

P.T.O

Q4) Check the stability of the retaining wall. Check for maximum and minimum pressure at base. **[17]**

Retained earth is on the vertical face of the stem.

Density of retained earth 18 Kn/cubic m

Angle of repose - 30 degrees

Coefficient of friction - 0.5

S.B.C Of soil – 300 Kn/Sq m

Top Width of stem - 350 mm

Bottom width of stem - 1000 mm

Height of stem - 5200 mm

Width of base - 3200 mm

Toe Projection - 900 mm

Depth of Base - 750 mm

SECTION - II

Q5) a) Compare and contrast Conventional RCC construction to Prestressed construction. Also state why only high strength steel and concrete is used in Prestressed construction. **[8]**

b) A prestressed concrete beam of overall size 300×600 is simply supported over a span of 7 m. The beam carries an udl of 20 Kn/m over its entire span inclusive of its self weight. The prestressing tendons are located at a distance of 100 mm from the neutral axis and provide a prestressing force of 1200 Kn. Calculate the extreme fibre stresses at mid span. **[9]**

Q6) a) Design a purlin factory for the following data **[8]**
   i) Span of the truss - 16 m
   ii) Spacing of the trusses - 4.5 m
   iii) Slope of roof 30 degrees
   iv) Spacing of purlins - 2.2 m
   v) Roofing is of G.i Sheets
   Use angle section

b) Write short notes on any two **[8]**
   i) Underground circular and rectangular water tanks
   ii) Measures to be taken in designing Earthquake resistant structures
   iii) Working stress method and Ultimate load theory

Q7) A compound stanchion of a factory building consists of 2 no ISMC 350 placed back to back. Calculate the spacing between the two sections so that they take maximum load. What load will such a column carry for a height of 4.8 m with both ends fixed, Design a suitable lacing or battening system for the same compound column with neat sketches. **[17]**

Q8) Write short notes on any four: **[17]**
   a) Limit state method
   b) Pretensioning and post tensioning
   c) Steps in designing a compound rectangular or trapezoidal footing
   d) Raft Foundations, Waffle slabs
   e) Cantilever retaining walls- Types and structural detailing
   f) Gantry Girders and Castellated beams

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P 816   **[4067] - 302**

T.Y. B.Arch.

THEORY OF STRUCTURES - III (b)
(2008 Yearly Pattern) (313425)

Time : 3 Hours]   *[Max. Marks :100*

Instructions to the candidates:-

1)   Answer any 3 questions from each section.

2)   Answer should be written in separate answer books.

3)   Neat diagrams must be drawn wherever necessary.

4)   Figures to the right indicates full marks.

5)   Use of non programmable calculators and steel tables allowed.

6)   Assume suitable data if necessary.

7)   Use Fe 415 steel and M 20 grade concrete

SECTION - I

Q1) Write short notes on any four: **[16]**

   a)   Problems of foundations in black cotton soil.

   b)   Piles, Need and Different Kinds Of Piles

   c)   Counter Fort retaining wall and structural detailing for same

   d)   Different Kinds of structural support systems for staircases

   e)   An Intze Water tank, Structural detailing of the same.

   f)   What is S.B.C and give values of S.B.C for different kinds of soil.

Q2) Design an isolated footing for a rectangular column of size 230×600 subjected to a load of 600 Kn. S.B.C = 250 Kn/sq m.

Design for depth, Design the steel and check for one way shear.   **[17]**

Q3) Design a RCC doglegged staircase for an office building for the following data   **[17]**

   a)   Width of the flight 1500

   b)   Floor to floor height - 3200 mm

   c)   Tread - 300 mm

   d)   The staircase is supported on 230 mm wide beams on outer edges of landings

Q4) Check the stability of the retaining wall. Check for maximum and minimum pressure at base. **[17]**

Retained earth is on the vertical face of the stem.

Density of retained earth 18 Kn/cubic m

Angle of repose - 30 degrees

Coefficient of friction - 0.5

S.B.C Of soil – 300 Kn/Sq m

Top Width of stem - 350 mm

Bottom width of stem - 1000 mm

Height of stem - 5200 mm

Width of base - 3200 mm

Toe Projection - 900 mm

Depth of Base - 750 mm

SECTION - II

Q5) a) Compare and contrast Conventional RCC construction to Prestressed construction. Also state why only high strength steel and concrete is used in Prestressed construction. **[8]**

b) A prestressed concrete beam of overall size 300 × 600 is simply supported over a span of 7 m. The beam carries an udl of 20 Kn/m over its entire span inclusive of its self weight. The prestressing tendons are located at a distance of 100 mm from the neutral axis and provide a prestressing force of 1200 Kn. Calculate the extreme fibre stresses at mid span. **[9]**

Q6) a) Design a purlin factory for the following data **[8]**
   i) Span of the truss - 16 m
   ii) Spacing of the trusses - 4.5 m
   iii) Slope of roof 30 degrees
   iv) Spacing of purlins - 2.2 m
   v) Roofing is of G.i Sheets
   Use angle section

b) Write short notes on any two **[8]**
   i) Underground circular and rectangular water tanks
   ii) Measures to be taken in designing Earthquake resistant structures
   iii) Working stress method and Ultimate load theory

Q7) A compound stanchion of a factory building consists of 2 no ISMC 350 placed back to back. Calculate the spacing between the two sections so that they take maximum load. What load will such a column carry for a height of 4.8 m with both ends fixed, Design a suitable lacing or battening system for the same compound column with neat sketches. **[17]**

Q8) Write short notes on any four: **[17]**

a) Limit state method

b) Pretensioning and post tensioning

c) Steps in designing a compound rectangular or trapezoidal footing

d) Raft Foundations, Waffle slabs

e) Cantilever retaining walls- Types and structural detailing

f) Gantry Girders and Castellated beams

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P1215

[4067] - 3007

M.Arch. (Computer Applications)
CA 301 : INTRODUCTION TO PROGRAMMING
(Sem. - III) (713401) (2008 Pattern)

Time : 3 Hours]   *[Max. Marks :75*

Instructions to the candidates:
  1) *Answer any 3 questions from each section.*
  2) *Question Nos. 1 and 5 are compulsory. Out of the remaining attempt 2 questions from Section - I and 2 questions from Section - II.*
  3) *Answers to the two sections should be written in separate books.*
  4) *Neat diagrams must be drawn wherever necessary.*

SECTION - I

Q1) a)   Explain the data types in C with examples.   **[14]**

  b)   Write a note on arithmetic and comparison operators in C.

Q2) Explain and compare loops in C, with example.   **[12]**

Q3) Write a program to generate the following patterns for a given n.   **[12]**

Example 1.   *   2.   *
               **   ***
               ***   *****
               ****   *******   for n = 4

Q4) a)   Explain the concept of constructors and destructors in C++, with example.

  b)   What is meant by polymorphism? Write a note function overloading.

                                                                      [12]

SECTION - II

Q5) a)   Write a note on object oriented programming.   **[6]**

  b)   Explain different types of inheritance.   **[6]**

  c)   Write a note on Java Program Structure.   **[5]**

Q6) a) Explain different components in VB.

b) Write a note on data types in VB.

[10]

Q7) a) Write a note on how to run a Java program.

b) Write a Java program to find the maximum number in an array.

[10]

Q8) a) Write a note on CPM and PERT.

b) Write a note on advantages of Java over C++.

[10]

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P1216

[4067] - 3008
M.Arch. (Computer Applications)
GIS AND REMOTE SENSING
(713402) (Sem. - III) (2008 Pattern)

Time : 3 Hours]   *[Max. Marks :75*
Instructions to the candidates:
  1)   All questions are compulsory.
  2)   Answers to the two sections should be written in separate answer books.
  3)   Neat diagrams must be drawn wherever necessary.

SECTION - I

Q1) Describe the types of Raster Data used in GIS.   **[13]**

OR

Describe the Network Analysis in GIS.

Q2) Describe in detail the spatial methods used for feature selection.   **[13]**

Q3) Write short notes on (any two) :   **[12]**
  a)   Distance Measurement.
  b)   GIS Components : Computer Hardware and Software.
  c)   Earth's Shape.

SECTION - II

Q4) Describe the interaction between the electromagnetic radiation and atmosphere.   **[13]**

Q5) Write short notes on (any two) :   **[12]**

    a)   Imaging Modes.

    b)   Image Interpretation Keys.

    c)   Define the following terms :

        i)   Spatial Resolution.

        ii)   Spectral Resolution.

        iii) Radiometric Resolution.

Q6) Explain any three digital image processes?   **[12]**

OR

Explain the elements of Visual Image Interpretation.

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P509

[4067] - 301

T.Y. B.Arch.

BUILDING TECHNOLOGY AND MATERIALS - III
(2008 Pattern) (313423)

Time : 3 Hours] [*Max. Marks : 100*

Instructions to the candidates:

1) *Answer any two questions from Q. 1 to 3 and Q. 4 is compulsory.*
2) *Answer to section-I and section-II should be written in two separate answer sheets.*
3) *Neat diagrams must be drawn wherever necessary.*
4) *Assume suitable data. If necessary.*

SECTION - I

Q1) A suspended ceiling with acoustical panels is to be provided for recording studio of size 4.0 × 3.0M with a clear height 3.0M.

a) Draw reflected ceiling plan and section showing structural framing and fixtures to the scale 1:20. **[15]**
b) Draw any three enlarged details to the scale 1:5. **[15]**

Q2) Draw sketches and explain (any three) : **[30]**

a) Joinery detail for steel truss.
b) Drained cavity for single basement.
c) Flooring and roofing Panels developed by C.B.R.I.
d) Reinforced Brick lintel for 230mm thick wall.
e) Explain RCC cantilever balcony with reinforcement.

Q3) Draw sketches and explain in detail (any three) : **[30]**

a) Built-up sections in steel.
b) Explain different types of pile foundation.
c) Details of framed timber partitions.
d) Explain stanchion fixing detail to stub column.
e) Setting out of RCC frame structure.
f) Importance of soil behavior in design of foundation.

SECTION - II

Q4) Write short notes with sketches (any five) :   **[40]**

    a) Ready mix concrete and light weight concrete.
    b) Explain guniting and shotcrete and its application.
    c) Alloyed steel used in building industry.
    d) Explain with sketches central hung sliding-folding door.
    e) Explain the methods of polishing for old and new wood.
    f) Type of glass and glass product used in building.
    g) Raft foundation.
    h) Explain installations of Elevators and escalators in buildings.

☒☒☒☒

P510

[4067] - 303
T.Y. B.Arch.
BUILDING SCIENCE AND SERVICES - I
(2008 Pattern) (313428 (b))

Time : 3 Hours]   *[Max. Marks : 100*

Instructions to the candidates:

1) *Answers to the two sections should be written in separate books.*
2) *Neat diagrams must be drawn wherever necessary.*
3) *All questions are compulsory.*
4) *Figures to the right indicate full marks.*

SECTION - I

Q1) Answer <u>any two</u> questions of the following :   **[2 × 15 = 30]**

   a) Explain with sketches different components and their working in room Air-Conditioning system by refrigeration.

   b) What are the different types of filters used in air-conditioning system? Explain with sketches.

   c) What are the types of Blowers used in Mechanical ventilation system? Explain with sketches.

Q2) Write short notes of the following (draw sketches wherever necessary) (any four) :   **[4 × 5 = 20]**

   a) Stack effect.
   b) Plenum system of mechanical ventilation.
   c) Split Air-Conditioner
   d) Fan Coil Unit.
   e) Cooling Tower.

SECTION - II

Q3) Answer <u>any two</u> questions of the following :   **[2 × 15 = 30]**

   a) Explain briefly defects of sound with the help of neat sketches.
   b) Explain structure borne noise and methods of controlling the same.
   c) State Sabine's Formula for finding reverberation time. What are the different factors of a room affect the acoustics in terms of Reverberation Time.

P.T.O.

Q4) Write short notes of the following (draw sketches wherever necessary) (Any four) : **[4 × 5 = 20]**

a) Sprinkler System.
b) Static storage tanks for fire-fighting.
c) Fire Escape Staircase.
d) Wet and Dry Risers.
e) Fire Resistance of Materials.

☒☒☒☒

P511

[4067] - 304

T.Y. B.Arch. (I.D.)

QUANTITY SURVEYING AND ESTIMATING

(2008 Course) (Theory) (313430 (b))

Time : 3 Hours]   *[Max. Marks : 100*

Instructions to the candidates:

1) *Answers to two sections should be written in separate books.*
2) *Neat diagrams must be drawn wherever necessary.*
3) *Figures to the right indicate full marks.*
4) *Use of logarithmic tables, slide rule, Mollier charts electronic pocket calculator and steam tables is allowed.*
5) *Assume suitable data, if necessary.*
6) *All questions are compulsory.*

SECTION - I

Q1) a) Work out the quantities for the following items of work, based on details given in the accompanying diagram (Fig.1), <u>Any Eight</u> :   **[40]**

     i)   R.C.C. M20 Column footings.

     ii)   R.C.C. M20 Plinth Beams below 230 thick walls.

     iii)   B.B.Masonry (1:6) <u>230 thick</u> in Ground Floor (only).

     iv)   Niroo finished plaster (1:4) internally to living room walls (only), inside jambs for D/W 50mm.

     v)   P.Kota Treads to entrances and G.F. stair steps.

     vi)   M.S.fully glazed windows to G.Floor.

     vii)   Ceramic tile dado (2.10m Ht) to bath (only).

     viii)   100mm Ht. P.Kota skirtings to Bed (only).

     ix)   P.C.C. (1:3:6) floor concrete, 100mm thick.

     x)   100 dia. C.I. Nahani Traps.

     xi)   M20 Roof Slabs for G.Floor.

     xii)   M20 R.C.C. stair steps for G.Floor (Waist slab 170, T = 300mm, R = 160mm).

   b) State the unit of measurement for the following :   **[10]**

     i)   M.S/Tor Steel Reinforcement.

     ii)   P/F Rolling Shutters.

     iii)   P/F C.C.T.W. Door frames.

     iv)   B.B.Masonry 350 thick in C.M. (1:6)

v) P/F PVC overhead tank.

vi) P/C (900 × 450) inspection chambers.

vii) P/F corrugafed A.C.roofings.

viii) Brick Bat Coba W/P to terraces.

ix) P/F 200 dia. Hume Pipes.

x) P/F 12 dia. bib cocks.

SECTION - II

Q2) Write short notes on (any two) :   **[12]**

a) Uses of Detailed Estimates.

b) Interim Bill Certification.

c) Contingencies.

d) Built-up area method for Approx. Estimates.

Q3) Based on material and labour rates stated below analyse and work out unit rates for the following items (any two) :   **[14]**

a) P/L P.C.C. (1:3:6) for floor sub-base.

b) P/F vitreous tile floorings on 30mm C.M. (1:6).

c) P/A 20 - 25mm sand faced plaster in C.M. (1:4)

d) P/C B.B.M. (1:6) steps.

[Material rates - aggregates - Rs.700/- per cum, river sand - Rs.1700/cum, Cement - Rs.280/bag, vitreous tiles - Rs.750/sqM, Bricks - Rs.5/each. Labour : i)   Rs.650/cum   ii)   Rs.200/sqM.   iii)   Rs.130/sqM.
         iv)   Rs.430/cum.]

Q4) Describe the items of work (any two) as in B.O.Q, stating inclusions and unit of measurement.   **[12]**
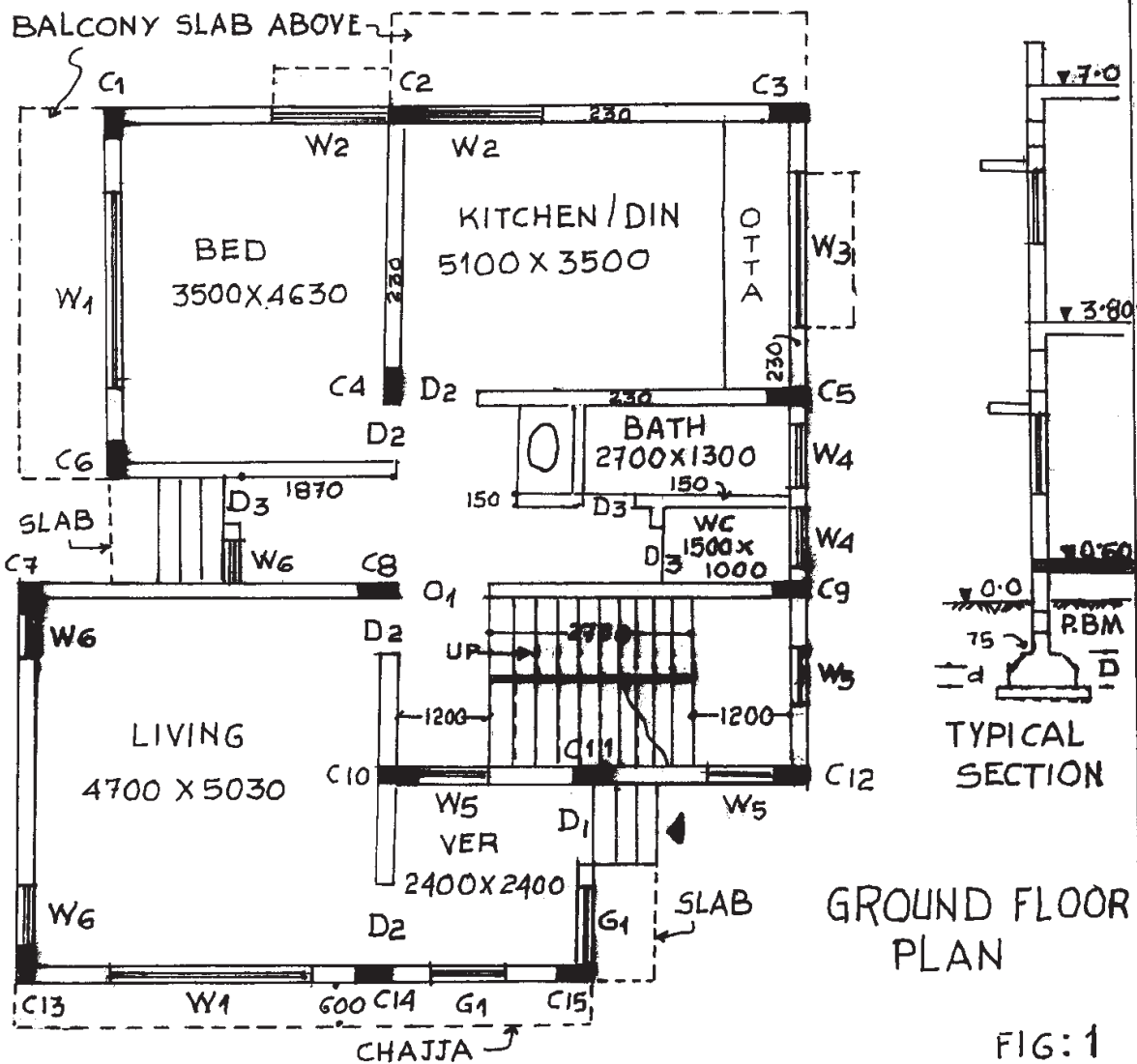
a) P/F 12 dia G.I.Pipes, Concealed.

b) P/C 900 × 450mm Inspection chambers.

c) Excavation for column pits in soil and S.M. (0-1.5m).

d) P/C B.B. Masonry half brick (110mm) thick in c.m (1:4).

Q5) Work out the materials required for the following quantum of work (any two) : **[12]**

a) C.C. (1:2:4) slabs - 32 cum.

b) 20 - 25mm thick external. S.F. plaster - 100 sqm.

c) P.C.C. (1:4:8) levelling courses - 60 cum.

d) B.B.Masonry in C.M. (1:6) - 20 cum.

R.C.C. DETAILS : ALL R.C.C. M20
ALL COL'S : 230 X 460 MM
ALL FTGS : 1200 X 1200 MM
D = 600 MM, d = 200 MM
ALL FLR. SLABS : 140 THICK
ALL LINTOLS : 230 X 230 MM.
ALL FLR. BMS : 230 X 500 "
PLINTH BMS : 230 X 460 MM.

SCHEDULE OF D/W/O
D_1 : 1000 X 2100, D_2 : 900 X 2100
D_3 : 800 X 2100 MM.
W_1 : 2600 X 1200, W_2 : 1500 X 1200
W_3 : 2000 X 900, W_4 : 900 X 900
W_5 : 700 X 700, W_6 : 400 X 1200
G_1 : 1000 X 1200, O_1 : 1200 X 2100
(M. S. GRILL)

BALCONY SLAB ABOVE

C_1 C_2 C_3
230
W_2 W_2
230
BED
3500 X 4630
KITCHEN / DIN
5100 X 3500
OTTA
W_1
W_3
230
C_4 D_2 230 C_5
BATH
2700 X 1300
W_4
C_6 150   150
D_3
W_4
SLAB D_3 1870
WC
1500 X 1000
C_7 W_6 C_8 O_1
D_3
C_9
W_6 D_2 UP W_3
1200   1200
LIVING
4700 X 5030
C_{10} C_{11} C_{12}
W_6 W_5 D_1 W_5
VER
2400 X 2400
W_6 D_2 G_1 SLAB
C_{13} W_1 600 C_{14} G_1 C_{15}
CHAJJA

GROUND FLOOR
PLAN

FIG : 1

▼7·0

▼3·80

▼0·60

▼0·0
75   P.B.M
d   D

TYPICAL
SECTION

⊠ ⊠ ⊠ ⊠

P512

[4067] - 305

T.Y. B.Arch.

SPECIFICATION WRITING

(313431 (b)) (2008 Pattern)

Time : 3 Hours]   *[Max. Marks : 100*

Instructions to the candidates:

1) *All questions are compulsory.*
2) *Figures to the right indicate full marks.*
3) *Answers to the two sections to be written in separate answer books.*
4) *Your answers will be valued as a whole.*

SECTION - I

Q1) Define Specification Writing. Discuss the importance of Specification Writing in Building Construction. **[10]**

OR

Describe the importance of material testing in construction projects and describe any two tests in detail.

a) Slump test.
b) Concrete Cube test.
c) Test for aggregate.

Q2) What aspects are considered in writing detail specifications? What are the types of Specifications? Discuss any one type of specifications in detail.**[10]**

Q3) Write Brief Specifications for (any three) :   **[15]**

a) Shahabad Flooring.
b) Uncoursed rubble Masonry.
c) R.C.C. Beam.
d) Internal Brick Wall.
e) Glazed tile dado.

Q4) Write Material Specifications for (any three) :   **[15]**

a) Sand.
b) Timber.
c) Coarse Aggregate.
d) Bricks.
e) Glass.

P.T.O.

SECTION - II

Q5) Write short notes on (any three) :   **[18]**

a) Septic Tank.
b) Use of Biogas.
c) Solar Panels.
d) Escalators.
e) Security Systems.

Q6) Answer (any two) :   **[12]**

a) Discuss types of air conditioning.
b) Explain ttermix flooring for industrial sheds.
c) Explain types of wiring.
d) Describe any two acoustic defects.

Q7) Answer (any two) questions :   **[10]**

a) Write Detailed Specifications for a door of a toilet for disabled person.
b) Explain any one type of Waterproofing.
c) Describe the types of communication systems.
d) Write specifications of a ramp for a disabled person.

Q8) Write Manufacturers names for (any ten) :   **[10]**

a) Internal Paint.
b) Mangalore Tiles.
c) P.V.C. Water Tank.
d) Plain Glass.
e) Elevators.
f) Stainless Steel Sink.
g) 43 Grade Cement.
h) Vitrified Tile.
i) Electric Cables.
j) Modular Switches.
k) Orissa Pan.
l) Wash Basin.

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P737

[4067] - 4001
Fourth Year B.Arch. (Interior Design)
INTERIOR DESIGN
(2006 Annual Pattern) (413481)

Time : 18 Hours] *[Max. Marks : 100*

Instructions to the candidates:

1) *The design solution will be evaluated as a whole.*

2) *Assume suitable data wherever necessary.*

3) *The candidates shall submit single line plans of the entire scheme with layout plan to the required scale at the end of the first day these drawings shall not be returned to the candidates, therefore due record of the same should be kept for subsequent days. The candidate shall not make any considerable deviations from the design submitted on the first day.*

4) *The drawings should be self-explanatory with structural scheme, should have clarity in all plans and sections.*

TELEVISION INSTITUTE

Television has established itself as powerful media and has enhanced the contribution of films and theater bringing it to the living room of every individual though television heavily borrows content from films and theater the medium needs special treatment and grooming for programs it produces on its own.

The Films and Television Institute in Pune wishes therefore to establish an independent Television Institute in it's premises for this purpose.

The selected plot is rectangular in shape having 70 m North-South and 60 m. East-West dimensions. It has 6m wide internal roads on the North and East side. The main Building of FTII is on the south side of the proposed site.

SPACE REQUIREMENTS

Figures to the right indicate carpet area in square meters. Adequate areas for passages, lobbies, porch, stairs, lift and other circulation areas, toilets and other services, parking facility, etc should be incorporated in design.

P.T.O.

TELEVISION INSTITUTE DESIGN PROGRAM :

SR NO	PARTICULARS	AREA IN SQ MTS
A	ADMIN BLOCK	
	Entrance Foyer	35
	Reception Counter	15
B	Public Toilet	
C	OFFICE AREAS	
	Directors Cabin	40
	Secretary's office	25
	Deans Cabin	30
	Conference Room (25 Capacity)	50
	VIP Lounge	40
	Staff Rooms	50
	Estate office	15
	Purchase section	15
		315
2	THEATRE	
	Entrance Lobby	70
	Office	20
	Public Toilets	
	Ticket Counter	15
	Theatre hall (300 persons)	500
	Store Room	50
	AHU	40
	Canteen	50
		745
3	TV DEPARTMENT	
	Classroom theatre -	80
	Recording (Large)	160
	Recording (Small)	80
	Master Control Room	20
	Video Taping Room	20
	Production Control	40
	TV Engineering	40
	Design and Graphic	40
	Viseo Editing	40
	Costume and Prop Section (incl makeup Room)	100
		620

4	FACILITY AREAS	
	Library incl. of film recording	150
	Cafeteria	75
	AV Room (2NOS)	50
	Conference Hall	100
	Art Galleries and Exhibition	150
		525
5	SECURITY CABIN	10
	GRAND TOTAL	2215

Drawing requirements : [10 marks]

First day submission -

1. Concept of design.

2. Single line layout plans showing site, buildings, parking, driveways, pathways, landscaping 1:200

3. Single line plans at all levels 1:200

Final submission :

1. Layout plans showing site, buildings, parking, driveways, pathways, landscaping, location of machinery, etc .... 1:200 **[15 marks]**

2. Plans at all levels with complete interior layout 1:200

   [25 marks]

3. Minimum two sections to explain the scheme 1:200

   [20 marks]

4. Minimum two elevations .... 1:200 **[15 marks]**

5. A sketch perspective specifically highlighting the interior theme.

   [15 marks]

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P738

[4067] - 4002

Fourth Year B.Arch. (Interior Design)
CONSTRUCTION, SERVICES AND MATERIALS - IV
(2006 Annual Pattern) (413482)

Time : 3 Hours] [*Max. Marks : 100*

Instructions to the candidates:

1) *Write answers to each section in a separate answer book.*
2) *Q. 1 from section-I is compulsory. Solve any two of the remaining questions from section-I.*
3) *Q. 5 from section-II and Q. 8 from section-III are compulsory. Solve any one of the remaining questions from section-II and section-III.*
4) *Support your answer with neat sketches.*
5) *Figures to the right indicate full marks for the question.*

SECTION - I

Q1) Provide architectural/construction details for the following : **[30]**

Engineering Workshop building with nominal size of 18.00M × 32.00M with a minimum internal height of 5.00M. Covered with MS roof trusses and Pre-coated MS corrugated roofing Sheets. Details to be provided (neatly hand-drawn sketches to appropriate scale shall also be acceptable).

a) Column and beam structure for external wall.

b) Roof trusses, purlins and roofing sheets.

c) Rainwater gutter and downtake pipes.

Q2) State the importance of plan configuration and regularity of form in increasing the earth-quake resistance of buildings. **[10]**

Q3) State the various ways for supporting projecting balconies in a Cinema/Drama Theatre. **[10]**

Q4) What are the various types of temporary structures. State the basic requirements for materials and structural systems for such structures. **[10]**

SECTION - II

Q5) Write short notes on <u>any three</u> of the following : **[15]**

    a) External Façade Paints.

    b) Materials for Curtain Walls.

    c) Waterproofing materials for Swimming Pools.

    d) Fire-resistant building materials.

    e) Materials used for main structural support in furniture.

Q6) Describe different materials used for roof-covering of long span structures. **[10]**

Q7) What materials are used for acoustical insulation and absorption? Discuss their properties and application. **[10]**

SECTION - III

Q8) Write short notes on <u>any three</u> of the following : **[15]**

    a) Smart fire detection and control systems.

    b) Smart Security systems for apartments.

    c) Smart systems for managing day-light.

    d) Smart systems for Water Supply.

    e) Smart Graphic Signage.

Q9) Describe salient features of modular kitchen furniture with sketches. **[10]**

Q10) Describe intelligent systems for disaster-management in buildings. **[10]**

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[4067] - 5001
Fifth Year B.Arch. (Interior Design)
PROFESSIONAL PRACTICE - II
(2006 Annual Pattern) (513482)

Time : 2 Hours]   *[Max. Marks : 50*

Instructions to the candidates:

1) *Question 1 is compulsory.*
2) *Solve any three of the remaining Questions.*
3) *Figures to the right indicate full marks for the question.*

Q1) Write short notes on <u>any four</u> of the following :.   **[20]**

   a) Market Value.

   b) Sentimental Value.

   c) Depreciation.

   d) Sinking Fund.

   e) Servient Heritage.

   f) Natural Rights.

   g) Solatium.

Q2) Describe the Rental (Income-Capitalisation) Method of Valuation. Under present market conditions is it suitable to apply this method to Valuation of properties? Give reasons for your answer.   **[10]**

Q3) Is Arbitration more suited than legal remedy in case of building contracts? Give reasons for your answer.   **[10]**

Q4) What is the need for Land Acquisition Act? Give basis for the Act and its process.   **[10]**

Q5) What are Easement Rights? Describe the types of Easements and the process by which such rights are acquired.   **[10]**

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