Total No. of Printed Pages:1

SUBJECT CODE NO:- H-610
FACULTY OF SCIENCE AND TECHNOLOGY
T.Y.Arch.
T.D.S. -V
(Revised)

[Time: Three Hours]   [Max.Marks:100]

Please check whether you have got the right question paper.
N.B
(i) Question no.1 is compulsory. Attempt any five from the remaining.
(ii) Assume Suitable data, if necessary.
(iii) Figures to right indicate the maximum marks.

Q.1	(a) What is Retaining wall. Give the different types as per its usage.	10
	(b) Draw neat sketches of Cantilever retaining wall & Counter-fort retaining wall.	10
Q.2	(a) Define and explain use of modular coordination exercises.	08
	(b) What are the general principles to be observed in Stone Masonry Construction?	08
Q.3	(a) What are the types of trusses for different span? Explain with neat sketches.	10
	(b) State the loads acting on roof truss.	06
Q.4	(a) What are the effects of earthquake on structure?	10
	(b) Explain the IS – code recommendations for earthquake.	06
Q.5	(a) Explain relation of structure with architecture.	10
	(b) Explain in details different types of grid.	06
Q.6	(a) What are the structural element? Explain column and beam in details?	10
	(b) Write different types of foundation in details.	06

Q.7   Write short note on any two: 16
(a) Principles for Reliable form of construction in earthquake resistant structure.
(b) Types of failures
(c) Advantages of masonry construction.
(d) Geometry of form.

1

Total No. of Printed Pages:02

SUBJECT CODE NO:- H-5003
FACULTY OF SCIENCE AND TECHNOLOGY
T. Y .Arch (Sem-VI)
A. B. C. M.- VI
[REV]

[Time: Four Hours]   [Max.Marks:100]

Please check whether you have got the right question paper.

N.B
1) Solve any two question from Section A and any three question from Section B.
2) Use Drawing sheet for Section A and answer sheet for Section B.
3) Assume suitable data wherever necessary.
4) Use sketches wherever necessary. To be solved on answer sheet.

Section A

Q.1   A swimming pool of $15\,M \times 25\,M$ is to be constructed for swimming competition. With   35
requirements like changing rooms, spectator gallery etc:
    i)   Draw key plan and key section to scale 1:100, showing the deck area, filtration plant,
        wash rooms and diving boards etc.
    ii)   Give construction details with scum channel.
    iii)   Lighting arrangement.
    iv)   Water filtration system in swimming pool.
    v)   Diving board details.

Q.2   Design a suitable False Ceiling using metallic sections for a computer centre, the size of the hall is 35
$5M \times 9M$. The floor to R.C.C. slab bottom is $3.5\,M$.
    i)   Draw plan elevation and section in 1:50.
    ii)   Important details to 1:2 scale (any two)
    iii)   Types of grinding systems.

Q.3   Design a sliding folding door for an office admeasuring $9M \times 15M$. Height of the room is 3.5M 35
as a partition. Assume suitable data.
    a) Draw plan elevation and section in 1:50.
    b) All important Constructional details in 1:2.

Section B

Q.4   Explain retaining wall along with angle of repose. Explain types of retaining walls with suitable   10
sketches.

Q.5   a)   Explain Aluminum extrusion process.   10

b)   Explain curtain Wall construction with sketches and various materials used for it.

Q.6   Explain with sketches the filtration cycle of Swimming Pools.   10

Q.7   Explain the construction of Cavity Walls with detailed sketches.   10

Total No. of Printed Pages:01

SUBJECT CODE NO:- H-5023
FACULTY OF SCINECE AND TECHNOLOGY
T. Y .Arch (Rev) (Sem-VI)
E.S.S. - IV

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

Please check whether you have got the right question paper.

N.B
1. Solve any five questions from the following.
2. Assume suitable data wherever necessary.
3. Use sketches wherever required.

Q.1	Enumerate: "Air Conditioning". Discuss – How the refrigeration cycle work.	20
Q.2	Write notes of the following: (any two) a) Cooking Tower b) AHU c) Types of A. C. Duct	20
Q.3	a) Discuss the criteria for selecting the "air conditioning system" for large office building. b) Enumerate: "Split Air Conditions".	10 10
Q.4	What is fire? Discuss – the classification of fires in detail.	20
Q.5	Write notes of the following: (any two) a) Fire Hydrant System b) Heat Detectors c) Fire Escape Staircase Design	20
Q.6	Explain "Fire Protection & Fire Safety requirements as per NBC for Lifts, Corridors & Basements in a building.	20

1

Total No. of Printed Pages:2

SUBJECT CODE NO:- H-5029
FACULTY OF SCIENCE AND TECHNOLOGY
T. Y .Arch (Sem V)
A.B.C.M. – V
(Revised)

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

Please check whether you have got the right question paper.

N.B   1. Answer any two questions Section A and any three from Section B.
       2. Answer to Section A must be solved on drawing sheets only. Answers to Section B must be solved in answer books.
       3. Assume suitable data wherever necessary and mention it clearly.
       4. Figures to the right indicate full marks.

Section A

Q.1   A Multipurpose hall (size $15m \times 12m \times 3.6m$) has an opening of size 2.1 m wide and 2.4 m in height. Client wants to provide a collapsible gate at the opening of multipurpose hall. Design a Collapsible Gate with all Joinery details and appropriate use and dimension of steel sections / members.   10
       1) Draw Key plan, elevation and section of hall with Collapsible Gate.   13
       2) Detail plan, elevation and detail cross section of Collapsible Gate.   12
       3) Joinery details of gate, fixing details of gate to the wall, bottom rail details, locking arrangement.

Q.2   Design a Steel Portal Frame for a factory shed having internal size as $10m \times 30m$. The height from finished plinth to bottom of beam is 6.0 m. plinth is 1.0m. Design a frame with appropriate dimensions and sections. Portal frames are placed at 5m c/c.
       Drawing requirements:
       i)   Key-plan, elevation and section of a shed.   07
       ii)   Detail Plan and Detail cross-section of Portal Frame.   11
       iii) Joinery details at Ridge, column-plinth, Connection details between the members.   12
       iv)   Sketch / view of a Portal Frame.   05

Q.3   Draw neat and proportionate sketches of the following. Mention suitable data and measurements   35
       wherever required.
       1) Tubular truss.
       2) Vault Door.
       3) Space frame.
       4) Steel Staircase.
       5) Still grillage foundation.

1

Section B

Q.4   What is Fly Ash? Write a detail note on properties and uses of fly ash in building industry.   10

Q.5   Write short note on: 10
       1) Sealants.
       2) Plastic.

Q.6   Define forms and use of Bitumen.   10

Q.7   Write a note on Electrical Insulators with their properties, types and uses in building construction.   10

Total No. of Printed Pages:01

SUBJECT CODE NO:- H-5034
FACULTY OF SCIENCE AND TECHNOLOGY
T. Y .Arch (Rev) (Sem-V)
T.D.S. - IV

[Time: Three Hours]   [Max. Marks: 100]

Please check whether you have got the right question paper.

N.B
      i) Question 1 & 5 are compulsory, solve any four from remaining.
      ii) Assume suitable data wherever necessary & mention as such.

Section A

Q.1	a) Explain what are lacing with neat sketch.	08
	b) A column of effective length 5.8m has to carry axial load of 1200KN. Design the column section Consisting of 2 channels placed back to back at suitable distance also design lacing for the column.	16
Q.2	Design a tension member in a roof truss to carry a force of 80KN. The diameter of connecting rivet is 16mm Design connection also with $fy=250N/mm^2$.	13
Q.3	What are gusseted base? Write the design procedure for gusseted base.	13
Q.4	a) Compare riveted & welded connections.	07
	b) What do you understand by rivet value? Explain types of rivet.	06
Q.5	Write notes on (any four)	24

      a) Types of Loads
      b) Types of failures in rivet joint
      c) State the assumptions in design if axially loaded joints.
      d) Welded connections
      e) Types of joints.

Q.6	Design a simply supported beam to carry a uniformly distributed load of 44KN/m. The effective span of beam is 8m.The effective length of compression flange of beam is 8m. The ends of beam are not free to rotate at bearings.	13
Q.7	a) Explain stepwise design procedure of tension member of a roof truss with welded joint.	08
	b) List different types of structural steel & explain physical properties of any two types.	05

1

H-5034

Total No. of Printed Pages:1

SUBJECT CODE NO:- H_5039
FACULTY OF SCIENCE AND TECHNOLOGY
T. Y .Arch (Sem-V)
H.A. - IV
[Revised]

[Time: Three Hours]   [Max. Marks: 100]

Please check whether you have got the right question paper.

N.B
1. Q.No.1 and Q.No.2 are compulsory.
2. Solve any six questions from the remaining.
3. Draw neat sketches wherever necessary.

Q.1	Why the Architecture style of Chandigarh and Ahmedabad is called Brutalist. What are the main features of the city planning of Chandigarh?	20
Q.2	Describe the Organic Architecture of F.L.Wright with two relevant examples.	20
Q.3	What is the contribution of Mies Van de Rohe to the development of International style of Architecture?	10
Q.4	What is the contribution of any one the following to the development of modern Architecture in India: Raj Rewal <u>OR</u> Achyut Kanvinde?	10
Q.5	Louis Kahn is the 'Master of Monumentality'. Explain giving appropriate examples.	10
Q.6	Explain with the help of examples the influence of Indian Vernacular Architectural tradition on B.V.Doshi's Architecture.	10
Q.7	Describe with examples the architectural Scenario during Pre-Independent India the Period of Settlement and period of transition.	10
Q.8	Explain the idea of 'Contemporary regionalism' in the works of Charles Correa with suitable examples.	10
Q.9	Explain the Art Nouveau Movement of the early 20th Century.	10
Q.10	Draw neat sketches of <u>any two</u> of the following: a) Villa Savoye b) Farnsworth House c) IIM Ahmedabad	10

Total No. of Printed Pages:03

SUBJECT CODE NO:- H-5044
FACULTY OF SCIENCE AND TECHNOLOGY
T. Y. Arch. (Sem-V)
E.C. & S.W.
(Revised)

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

Please check whether you have got the right question paper.

N.B
1. Question No.1 from section A is compulsory.
   Out of the remaining 3 questions from section A solve any TWO and solve any TWO questions from section B.
2. Assume suitable data wherever necessary and mention it clearly.
3. Figures to the right indicate full marks.

SECTION A

Q.1 Find out the cost of any <u>four</u> items from the table given below by long wall and short wall method. 44
The quantities of the items worked out must be supported by detailed measurements in a neat tabular form. Quantities worked out without detailed measurements will not carry any marks. Mention correct unit of measurement as per D.S.R.

Sr.no.	Description	Quantity	Rate	Unit	Amt.
1.	Excavation for foundation		80.00		
2.	Uncoursed rubble stone masonry in foundation & plinth		2100.00		
3.	Providing $1\frac{1}{2}$ brick thick wall in superstructure		4900.00		
4.	Providing M.S. windows		2533.00		
5.	Providing M.20 R.C.C slab (rate without reinforcement)		6150.00		
6.	Providing total reinforcement		60,000/-		
7.	Providing sand faced cem. Plaster for external walls.		210.00		

1
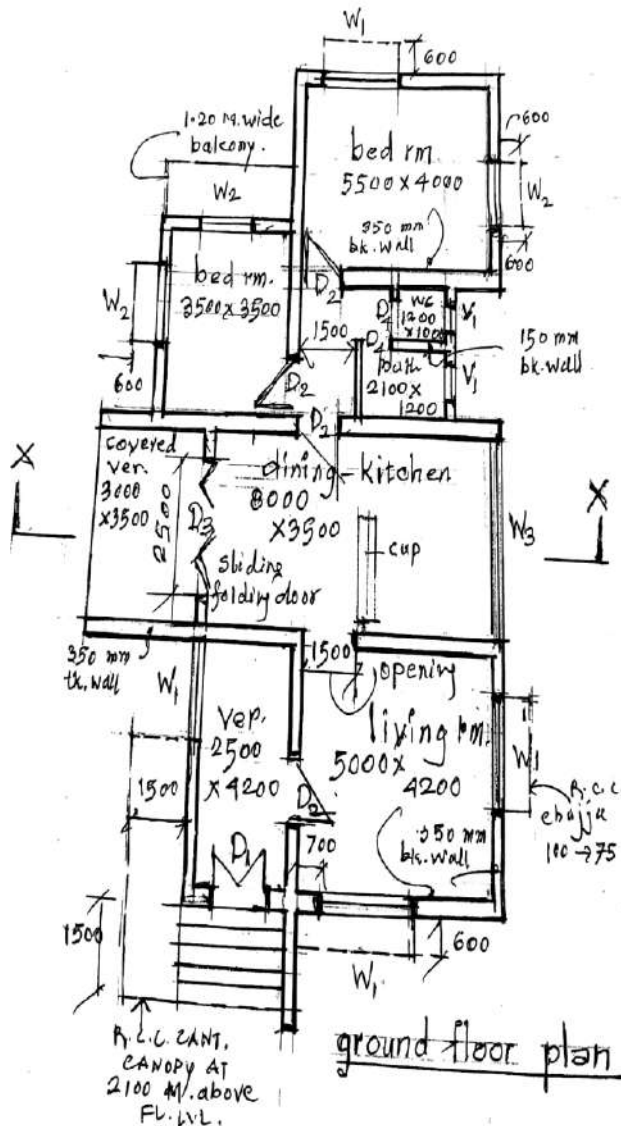
Schedule of t.m.doors
$D_1 - 1500 \times 2100$
$D_2 - 1000 \times 2100$
$D_3 - 2500 \times 2100$
$D_4 - 750 \times 2100$

Schedule of mild steel windows
$W_1 - 2500 \times 1200$
$W_2 - 1500 \times 1200$
$W_3 - 3500 \times 900$ (1200 *above FL. LVL*)
$V_1 - 600 \times 900$
LINTELS 350 × 150 and 150 × 150 (on half bk wall)

ground floor plan

section on XX
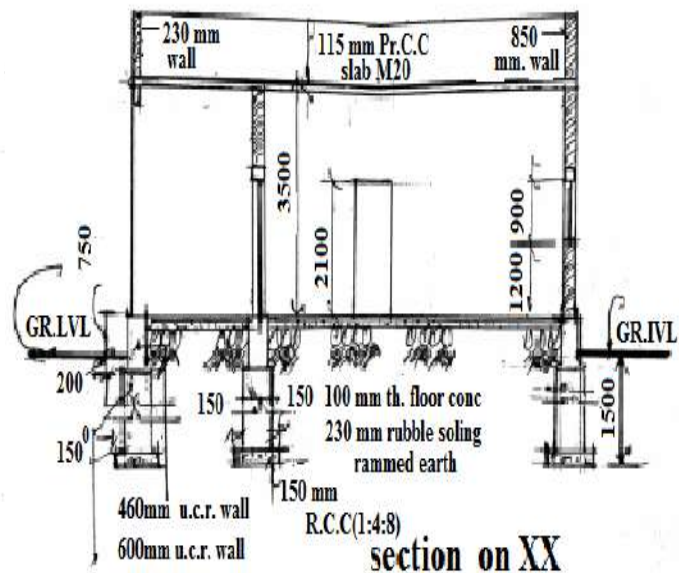
Q.2 Workout, by rate analysis, the rate of uncoursed rubble stone masonry in foundation & plinth in cement mortar 13
1:6 prop. The following data is available.
   a) Rate of rubble = Rs.2500/Truck
   b) Rate of cement = Rs.7400/M.Ton.
   c) Rate of sand = Rs.10,000/Truck
   d) Labour rate = Rs.460/m³
   e) Payload factor
   Sand = 5.75 m³
   Rubble = 5.50 m³

Q.3 Workout the rate of cement plaster for internal surface of walls in cement mortar 1:4 prop. The data is 13
as follows
   i) Rate of cement = Rs.6800/M.Ton.
   ii) Sand = Rs.9000/Truck.

iii)   Labour rate = Rs.55/m^2

The thickness of cement plaster is 20mm.

Q.4   Write short notes on any three
- a) Cost planning   05
- b) Approximate estimate by Bay area method   04
- c) Contingencies   04
- d) Provisional sum   04

SECTION B

Q.5   Write detailed specifications for providing and constructing half brick thick wall in cement mortar 1:4 prop.   15

Q.6   Write detailed specifications for providing and constructing brick masonry in cement mortar 1:6 for inspection chamber $60 cms \times 45 cms$ for house drainage system.   15

Q.7   Write detailed specifications for providing and fixing teak wood door shutters of size 50×2025 in a single shutter.   15

Total No. of Printed Pages:2

SUBJECT CODE NO: H-5048
FACULTY OF SCIENCE AND TECHNOLOGY
T.Y. Arch. (Sem-V)
E.S.S. III
(Revised)

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

Please check whether you have got the right question paper.

N.B   i) Q.No.1 and Q.No.6 are compulsory.

                      ii) Solve any three questions from section A & B each, excluding compulsory questions.

                      iii) Assume suitable data if necessary.

Section A

Q.1   Attempt any seven.   14
  a) What do you mean by Light?
  b) Define Luminous flux.
  c) Define Luminous intensity.
  d) Give Application of Earthling.
  e) State features of Fluorescent Lamp.
  f) Explain Brightness & Glare.
  g) State different material used in lamps.
  h) Explain Utilization Factor.
  i) State Factors Affecting on Visual Task.
  j) Explain OHMs Law with example.

Q.2   a) Explain Different Types of wiring system.   06
         b) Explain with neat sketch Metal Halide Lamp.   06

Q.3   a) Explain perfect level of Illumination with some Required Illumination level.   06
         b) State & Explain the Energy Conservation tips.   06

Q.4   a) State & Explain Causes of Electrical Accident.   06
         b) Explain difference between artificial & Natural lighting.   06

Q.5   Write a short note on
  a) Luminary's classification   04
  b) LED Lamp   04
  c) Method of Mounting & Lighting Control   04

1

Section B

Q.6   Attempt <u>any seven</u>.   14
    a) Coefficient of utilization.
    b) Selection criteria for selection of lift.
    c) State different NBC Codes.
    d) State Application & Properties of Incandescent lamp.
    e) Define Lamberts Cosine Law.
    f) Define Maintenance Factor.
    g) Explain Necessity of Lightning Conductor.
    h) Explain Desirable properties Elevator.
    i) State the different types of Elevator.
    j) What is required Illumination require for study room in building.

Q.7   a) Explain in details Different lighting Scheme.   06
    b) Explain in details Indoor Lighting Design.   06

Q.8   a) The front of a building 35×18 m is illuminated by 15 lamps; the wattage of each lamp is   06
        80 W. The lamps are arranged so that uniform illumination on the surface is obtained.
        Assuming a luminous efficiency of 20 lumens/W, the coefficient of utilization is 0.8, the
        waste light factor is 1.25, DF = 0.9. Determine the illumination on the surface.
    b) Explain Solar Energy system for Commercial building.   06

Q.9   a) Explain in details comparison between different light source.   06
    b) A drawing, with an area of 18×12m, is to be illuminated with an average illumination of   06
        about 150 lux. The lamps are to be fitted at 6m height. Find out the number and size of
        incandescent lamps required for an efficiency of 20 lumens/W. UF = 0.6, MF = 0.75.

Q.10   Write a short note on
    a) Basic principle of Light control   04
    b) Criteria for planning sizing of Elevator   04
    c) Preventive & Breakdown Maintenance   04

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Total No. of Printed Pages:03

SUBJECT CODE NO:- H-5055
FACULTY OF SCIENCE AND TECHNOLOGY
T. Y .Arch (Rev) (Sem-VI)
A.D. V

[Time: 1st Day-6 Hours   **[Max. Marks: 100]**
          2nd Day-3+3 Hours
          3rd Day-3+3Hours]

                    Please check whether you have got the right question paper.

N.B   1)   The candidates are instructed to submit line plans, site plan at the end of the first day. No major deviations will be allowed in the final design from the design submitted at the end of the 1st day sketch should be written in bold letters.

       2)   The candidates are further instructed to submit the final design in the form of a portfolio binding all the drawings including sketches, tracings, and 1st Day sketches together and covering the portfolio with white sheets on both sides. The candidates shall write their examination number on the top right hand corner of the cover sheet. All the drawings in the portfolio shall carry the examination number of the candidate.

       3)   The candidates are instructed to see that all the drawings in the portfolio are signed by the invigilator.

       4)   Your design paper will be assessed as a whole.

       5)   Assume suitable data wherever possible and mention it clearly.

Topic: GENERAL HOSPITAL

There is a need of General Hospital in every urban and semi urban areas. These medical facilities are required to be provided in separate campus. As a designer, you are asked to design it with modern facilities (advanced materials and construction technologies with building services) to fulfill General hospital. Building design requirements are as follows:

> **Outpatient Department**
>   a) Administration and accounts   (50-60 sqm)
>   b) Reception and waiting area   (80-100 sqm)
>   c) Consulting Orthopedists cabin   (15 sqm each)- 5 nos
>   d) Visiting doctors(specialist) cabin   (15 sqm each)- 2 nos
>   e) Doctor's rest room   (25 sqm)
>   f) Nurse's/compounder's station   (40 sqm)
>   g) P.O.P. room (for Band aid)   (25 sqm)-2 nos.
>   h) Pharmacy with storage   (30 sqm)
>   i) Store room   (15 sqm)
>   j) Wash rooms   (as per the norms)

1

> **Casualty/ Emergency entry**
>   a) Casualty room (4 beds)   (40-50 sqm)
>   b) Attendant's cabin (with record storage)   (15-20 sqm)
>   c) Resident Doctor's room (self contained)   (40 sqm)
>   d) Examination room   (20 sqm)
>   e) Band aid room   (20 sqm)
>   f) Wash rooms

> **Diagnostic section**
>   a) X-ray room   (20 sqm)-2nos
>   b) Pathology lab   (30 sqm)
>   c) Record room   (20 sqm)
>   d) Attendant's cabin   (15 sqm)
>   e) Wash rooms (as per norms)

> **ICU (Intensive care unit)**
>   a) ICU for 8 patients (with nurses station)   (100 sqm)
>   b) Nurses rest room   (15 sqm)
>   c) Doctors rest room   (20 sqm)
>   d) Waiting space for guardians of the patients   (30 sqm)
>   e) Wash rooms (as per norms)
>   f) Cylinder room   (20 sqm)
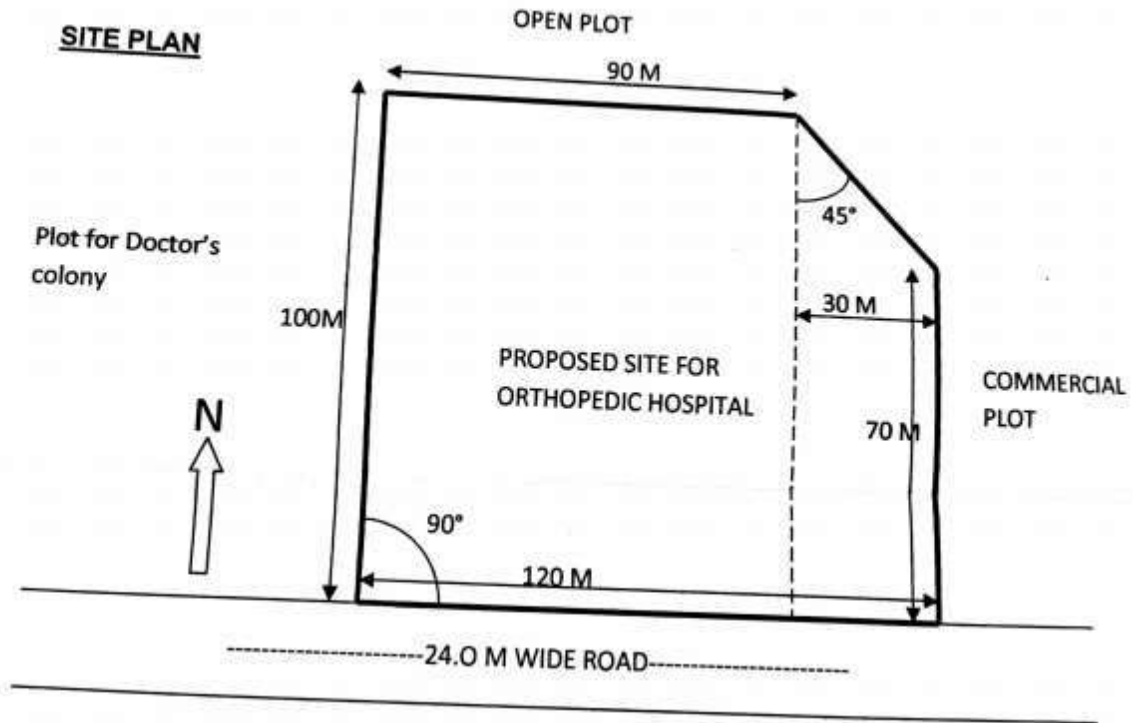
> **In patient department**

a) Special deluxe room with single occupancy (attached toilet)   10 nos. (15-20sqm each)
b) Special suits   5 nos (30-45 sqm)
c) Semi deluxe room with double occupancy (attached toilet)   10 nos. (25 sqm each)
d) General ward with wash rooms for 8 patients (2 nos.)
e) Store   (25-30 sqm)
f) Pantry   (15-20 sqm)

> **Operation theatre**

a) Operation theatre (2 nos.)   (25 sqm each)
b) Preparation room   (20 sqm)
c) Patient's room (2 nos.)   (15 sqm)
d) Stretchers area (for 4 nos.)   (20 sqm)
e) Wash room for the doctor

> **Cafeteria (for 50 people)**, with kitchen, store, washing area, seating area, pantry , goods unloading platform.   (250-300 sqm)
> **Parking area (as per the norms)**, for 2Ws, 4Ws, and Ambulance (2 nos).

SITE PLAN

OPEN PLOT

90 M

Plot for Doctor's colony

100M

N

PROPOSED SITE FOR ORTHOPEDIC HOSPITAL

45°

30 M

70 M

COMMERCIAL PLOT

90°

120 M

------------------24.O M WIDE ROAD------------------

Drawing requirements
1) Site plan – 1:500
2) All floor Plans- 1:100/1:200
3) Section (min. 2 nos) cutting through toilets/stair case- 1:100
4) Elevation all four sides 1:100
5) Interior as well as external views

Total No. of Printed Pages:02

SUBJECT CODE NO:- H-5069
FACULTY OF SCIENCE AND TECHNOLOGY
T. Y. Arch (CBCS) (Sem-V)
Architectural Building Construction - V

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

Please check whether you have got the right question paper.

N.B
1) Answer any two question from Sec 'A' and any two from Sec 'B'.
2) Answer to Sec A must be solved on drawing sheets only. Answers to sec 'B' must be solved in answer books.
3) Assume suitable data wherever necessary and mention it clearly.
4) Figures to the right indicate full marks.

Section-A

Q.1   A Cloth shop (size 12mx 06mx 3.6m) has an opening of size 2.4m wide and 2.7 m   35
in height. Client wants to provide a Rolling Shutter at the opening of the shop.
Design a Rolling Shutter with all joinery details, appropriate use and dimension of
steel sections/members.
1) Draw Key plan, elevation and section of Shop with Rolling Shutter.
2) Details plan, elevation and detail cross section of Rolling Shutter.
3) Joinery details of R/Shutter, fixing details to the wall, locking arrangement.

Q.2   Design a Steel Portal Frame for a factory shed having internal size as 15mx24m.   35
The height from finished plinth to bottom of beam is 6.0 m. Plinth is 1.2m. Design
a frame with appropriate dimensions and sections. Portal Frames are placed at 4m
c/c.

Drawing requirements:
a) Key-plan, elevation and section of a shed.
b) Detail Plan and Detail cross-section of Portal Frame.
c) Joinery details at Ridge, column-plinth, Connection details between the
members.
d) Sketch/view of a Portal Frame.

Q.3   Draw neat and appropriate sketches of the following. Mention suitable data and   35
measurements wherever required.
1) Different types of Welds.
2) Vault Door.
3) Deck slab.
4) Collapsible gate.
5) Still grillage foundation.

1

Section-B

Q.4   Define the different types of staircases with examples where these types are   15
       provided.

Q.5   Write a note on different roof coverings with various materials.   15

Q.6   What is North Light Truss? Explain its need with neat sketches.   15

Total No. of Printed Pages:01

SUBJECT CODE NO:- H-5070
FACULTY OF SCIENCE AND TECHNOLOGY
T. Y. Arch (CBCS) (Sem-V)
Building Materials - V

[Time : Two Hours]   [Max.Marks:40]

Please check whether you have got the right question paper.

N.B
1) Solve any Four Questions
2) All Question carry equal Marks
3) Draw sketches wherever necessary

Q.1   Enumerate the use of plastics and their application in the Building Industry.   10

Q.2   What are conductors and non-conductors?   10

Q.3   What are the different forms of bitumen and the uses of bitumen?   10

Q.4   Write short note on following (any two)   10
        a) Gypsum Boards
        b) Sealants for Joints
        c) Properties of Asphalt

Q.5   Enumerate the different uses of Fly Ash in the Building Industry   10

Total No. of Printed Pages:02

SUBJECT CODE NO:- H-5071
FACULTY OF SCIENCE AND TECHNOLOGY
T. Y. Arch (CBCS) (Sem-V)
Theory and Design of Structure-IV

[Time: Three Hours]   [Max. Marks:80]

Please check whether you have got the right question paper.
N.B.
1) Do not write anything on questions paper except seat no.
2) Answer any three questions from section A and any two questions from section B
3) Student should note no supplement s will be provided
4) Assume suitable data if necessary.

Section – A

Q.1	Design laterally restrained simply supported steel beam of span 4.5m subjected to udl of 40KN/m. Apply checks for shear and Deflection. Take Fy=250N/mm^2.	13
Q.2	a) Explain different types of connections made in steel structure.	07
	b) Explain Tension and compression member in steel structure construction.	06
Q.3	a) Explain strength and failure criteria for riveted joints.	06
	b) Write advantages of steel structure over RCC structure.	07
Q.4	a) Determine the strength of tension member ISA 125 X 75 X 8 connected to a gusset plate by means of 20mm diameter rivets.	10
	b) Write a short note on net effective area of Tension Member.	04
Q.5	Write short notes on following (any three):	13

    i)   Flanged Beam
    ii)   Lacing system
    iii)   Welding process
    iv)   Types of rolled steel section

Section B

Q.6	A steel column has to support a load of 1000KN. The effective length of column 6m. Design a built up column with two channels placed back to back. Design lacing system also.	20
Q.7	a) Explain different components of truss with well labeled sketch and explain load distribution on truss	10
	b) Explain Built up section with neat sketch.	10

1

H-5071

Q.8 Write short note on (any four): 20
- A) Grillage Foundation.
- B) Types of Truss.
- C) Double Lacing system.
- D) Welded Connections.
- E) Different types of loads coming on roof purlins.

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Total No. of Printed Pages:01

SUBJECT CODE NO:- H-5072
FACULTY OF SCIENCE AND TECHNOLOGY
T. Y. Arch (CBCS) (Sem-V)
History of Architecture-IV

[Time: Three Hours]   [Max. Marks:80]

Please check whether you have got the right question paper.

N.B.   1) Solve any four questions
             2) Draw neat sketches wherever necessary

Q.1   What is modernism? Discuss how twentieth century architecture is a product of modernity In   20
       what ways did modern architecture distibguish itself from traditional architecture?

Q.2   Industrial revolution gave rise to 'new patrons – new forms' Discuss this statement and   20
       elaborate the effects of Industrial Revolution on construction Technology and Design with
       suitable examples.

Q.3   What were the "Five Points of a New Architecture" according to Le Corbusier? Discuss his   20
       contribution to 20th Century Modern Architecture.

Q.4   a) Louis Kahn is a 'master craftsman of spaces and volumes'. Explain giving appropriate   10
               examples.
           b) What is the contribution of Mies Van de Rohe to the development of International style 10
               of Architecture?

Q.5   Explain the contribution of any two of the following Architect to Modern Architecture   20
           a) Charles Correa
           b) Tadao Ando
           c) Paul Rudolph
           d) Achyut kanvinde

Q.6   'F.L. Wright's distinct style made him one of the biggest forces of Architecture. Explain this 20
       statement through his projects.

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Total No. of Printed Pages:2

SUBJECT CODE NO:- H-5073
FACULTY OF SCIENCE AND TECHNOLOGY
T.Y.Arch. (CBCS) (Sem-V)
Estimating Costing & Specification Writing

[Time: Three Hours] **[Max.Marks:80]**

Please check whether you have got the right question paper.

N.B
1. Do not write anything on questions paper except seat no.
2. Question No 1 is compulsory.
3. Answer any one questions from remaining section A and any two questions from section B.
4. Answer suitable data if necessary.

Section–A

Q.1 Find out the cost of any three item from the table given below by Long Wall short Wall method. 30
The quantities must be worked out in tabular form in measurement sheet. Quantities without detailed measurement will not carry any marks. Mention correct units of measurements as per DSR. Depth of foundation = 1.2 m

Sr No	Description	Quantity	Rate	Units	Amt.
01	Providing M20 RCC Slab		6200/-		
02	Excavation in foundation		125/-		
03	UCR Masonry in foundation and plinth		1800/-		
04	M 20 RCC Chajja		6500/-		
05	Providing 230 mm thk. Brick wall in super structure only		7000/-		

Refer Fig 1

Q.2 What do you understand by Estimate and also state its importance. 10

Q.3 Work out the rate of RCC Footing (M-20) by rate analysis. Use the following data. 10

| Rate of cement	Rs 6400/-M. Ton
Rate of Sand	Rs 12000/- Truck
Rate of Aggregate	Rs 3500/- Truck
Labour Rate	Rs 1200/-m^3

Section B

Q.4 Write short notes on following (any Two) 20
  i)   Importance of Specification
  ii)   Center Line Method
  iii) Types of Approximate Estimate

1

Q.5   a) Write down detailed specification for laying M20 slate in load bearing structure.   10

        b) Write Down the detailed specification for the construction of half brick wall in R.C.C. frame structure.   10

Q.6   (a) Write short note on contingencies   10

        (b) Write short note on Provisional Sum.   10
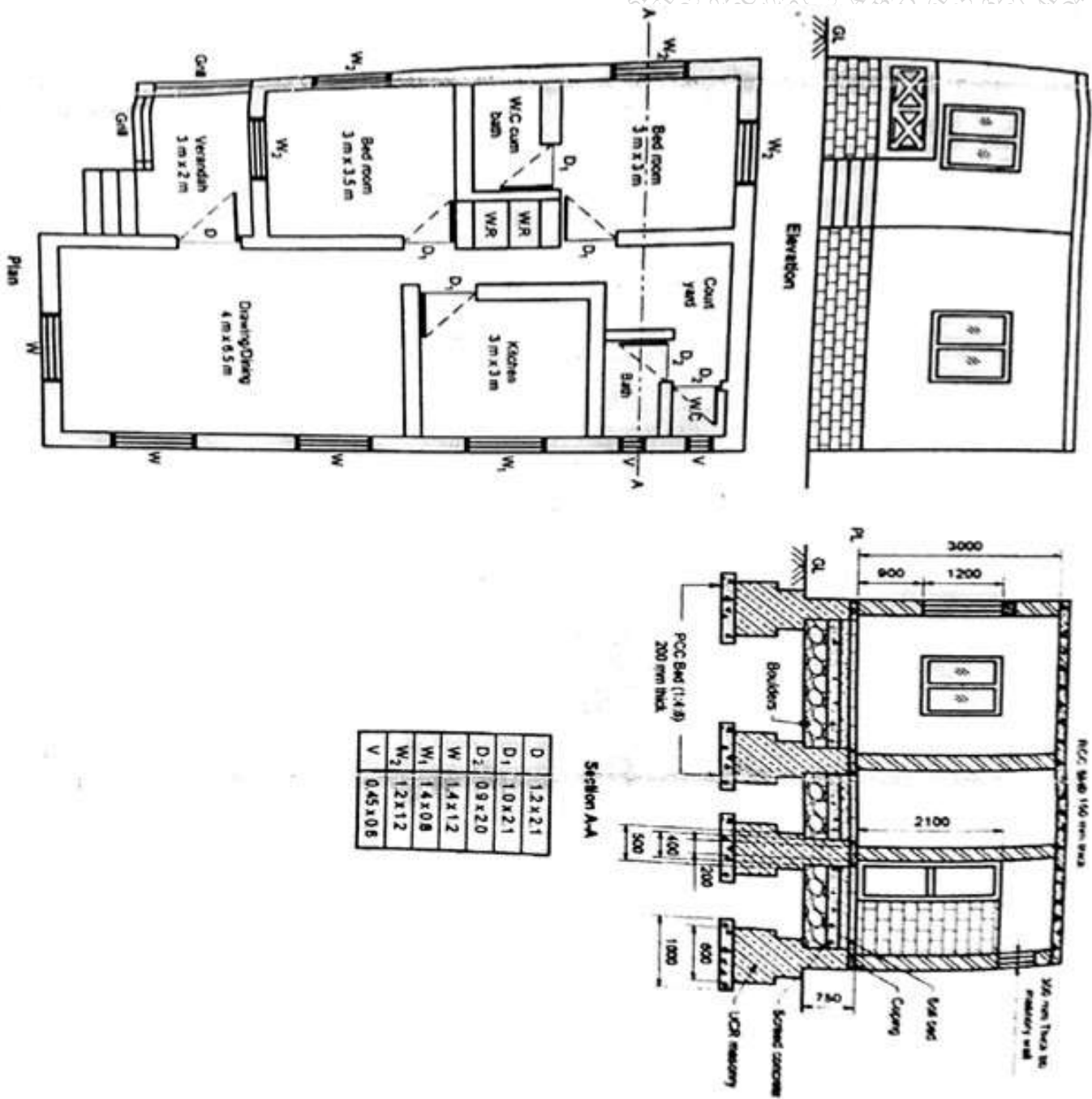
Total No. of Printed Pages:1

SUBJECT CODE NO:- H-5074
FACULTY OF SCIENCE AND TECHNOLOGY
T. Y. Arch (CBCS) (Sem-V)
Environmental Science and Services - III

[Time: Three Hours]   **[Max.Marks:80]**

Please check whether you have got the right question paper.

N.B   1. Solve any Four Questions from the following.
                   2. Assume suitable data wherever necessary.
                   3. Use sketches wherever required.

Q.1   a) State the general safety measures to be taken during installation of a wiring system.   (08)
       b) Explain –"Surface Conduit & Casing and Capping" types of electrical wiring systems.   (12)

Q.2   Enumerate: "Types of Earthing Systems" (any two). State the factors on which earth-resistance   (20)
       value depends.

Q.3   Write notes on the following: (any four)   (20)
           a) RCCB & ELCB
           b) Distribution Board
           c) CFL Lamps
           d) Earth Materials
           e) Switches

Q.4   Enumerate "Moving Walk". State the criteria for planning, sizing, selection and grouping of it   (20)
       for a building.

Q.5   Solve Any Two of the following: (20)
           a) Hospital Elevator
           b) Valance Lighting
           c) Lighting scheme for Hotel Lobby.

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