DEPARTMENT OF ARCHITECTURE
AU COLLEGE OF ENGINEERING
I/V B. Arch. Degree Examination

MODEL QUESTION PAPER
ARCHITECTURE DESIGN-I
(Effective from the admitted batch of 2020-2021)

SECOND SEMESTER

Time: 5 hours **Max. Marks: 50**

PART-A IS COMPULSORY

PART-A

1x40=40M

1. Design an internet center for 6 cubicles and 1 reception/billing counter. The space should cater all the basic needs of the center like space for printers, waiting lounge, etc. the proposed site is 8mx 8m, with a 18m wide approach road on north side.
   Drawing to be submitted:
   - Plan (including site) -1:50
   - Elevation -2nos -1:50
   - Section-2Nos -1:50
   - Perspective

PART –B
ANSWER ANY ONE

1x10=10M

2. Define scale. Distinguish between monumental scale and human scale with the help of suitable examples.
3. Discuss the anthropometric data and clearances for
   a. Work station for an office
   b. Kitchen counter

DEDEPARTMENT OF ARCHITECTURE
AU COLLEGE OF ENGINEERING
I/V B. Arch. Degree Examination

MODEL QUESTION PAPER
ARCHITECTURAL DRAWING AND GRAPHICS-II
(Effective from the admitted batch of 2020-2021)

SECOND SEMESTER

Time: 5 hours **Max. Marks: 50**

PART-A IS COMPULSORY

PART-A

1x20=20M

1. Draw the following
    a. One-point perspective for Figure1A with eye level at 1.5M
    b. Two –point perspective for Figure2 with eye level at 1.5M

PART –B

Answer any **THREE** all question carry **EQUAL** marks

3x10=30M

2. Show the Sciography in plan and elevation for any two objects shown in Figure1
3. Design an art wall at the entrance lobby of a nursery school conveying a theme
4. Answer the following
    a. Differentiate shade and shadow with suitable sketches
    b. Define station point
    c. Explain with neat sketches the symbols for any 5 hard and soft landscapes
5. Draw a freehand perspective of Figure 2 and render with sky, tree and human to understand scale and proportion.
6. Draw a village setting during festive season and render it with color of any medium.

[P.T.O]

Figure-1

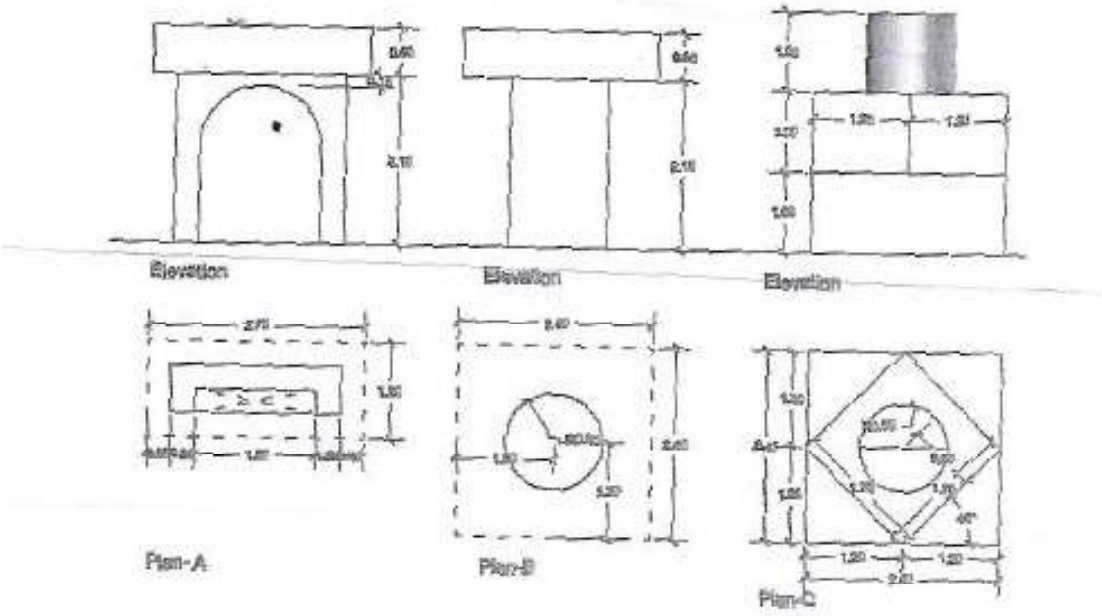
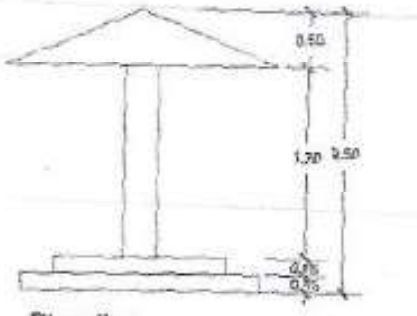
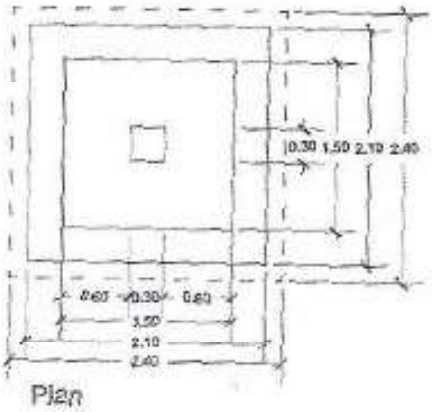


Figure-2





DEDEPARTMENT OF ARCHITECTURE
AU COLLEGE OF ENGINEERING
I/V B. Arch. Degree Examination

MODEL QUESTION PAPER
BUILDING MATERIALS AND CONSTRUCTION-II
(Effective from the admitted batch of 2020-2021)

SECOND SEMESTER

Time: 5 hours **Max. Marks: 50**

Answer any **ONE** question from Part-A
Answer any **THREE** from Part-B, all question carry **EQUAL** marks

1x20=20M

PART-A

1. Draw a partly paneled and partly glazed door in an opening size of 1.20M x 2.10M in a 0.23M thick brick wall. Draw its plan, elevation and section to a scale of 1:20

2. Draw neatly double joist timber floor of span 4.00M x 6.50M Draw its plan and section showing details and methods of fixing bridging joist to binders. Also mention merits and demerits. (Adopt a suitable scale where details are all clear and legible in the drawing).

PART-B

3x10=30M

3. Differentiate between
    a) Mullion and Transom
    b) Rolling door and Sliding Door
    c) Gable windows and Dormer Windows
4. Write Short notes on the following timber joints with neat sketches and explain their advantages
    a) Tusk and Tenon
    b) Dovetailing
    c) Butt joint and Rebated Joint
    d) Tongue and Grooved Joint
5. What is meant by seasoning of timber? Write a note on natural and artificial seasoning of timber?
6. Briefly explain the process of painting the following
    a) Newly plastered surface
    b) New wood surface
    c) Iron and Steel Surface
7. Briefly explain the use of steel as a building material in building industry along with its applications and advantages.

DEDEPARTMENT OF ARCHITECTURE
AU COLLEGE OF ENGINEERING
I/V B. Arch. Degree Examination

MODEL QUESTION PAPER
HISTORY OF ARCHITECTURE-I
(Effective from the admitted batch of 2020-2021)

SECOND SEMESTER

Time: 3 hours **Max. Marks: 70**

Answer any **FIVE** questions
All questions carry **EQUAL** marks.

1. Explain briefly about Mesopotamian Architecture
2. Describe briefly the features of Egyptian temples. Explain one of the examples with suitable sketches in detail.
3. Discuss about "Mastaba" and types of mastabas with details sketches
4. Explain different classic Greek orders with detailed sketches.
5. a)Write short notes on temples at Rome with neat sketches
   b) Write short notes on coliseum at Rome
6. Explain characteristic features of Romanesque with typical example
7. With the help of neat sketches explain the features of Byzantine Architecture
8. Discuss at least two structures, built on 'Acropolis", Greek Architecture along with details and sketches.

DEDEPARTMENT OF ARCHITECTURE
AU COLLEGE OF ENGINEERING
I/V B. Arch. Degree Examination

MODEL QUESTION PAPER
CARPENTRY AND MODEL MAKING WORKSHOP
(Effective from the admitted batch of 2020-2021)

SECOND SEMESTER

Max. Marks: 50

PRACTICAL & VIVA-VOCE EXAMINATION

DEDEPARTMENT OF ARCHITECTURE
AU COLLEGE OF ENGINEERING

I/V B. Arch. Degree Examination

MODEL QUESTION PAPER
STRUCTURAL MECHANICS-II

(Effective from the admitted batch of 2020-2021)

SECOND SEMESTER

TIME: 3 HOURS **Max. Marks: 70**

Answer any **FIVE** Questions
All questions carry **EQUAL** Marks

1. Analyse the continuous beam shown in Fig.1 using the theorem of three moments. E is constant. Draw the shear force and bending moment diagrams.

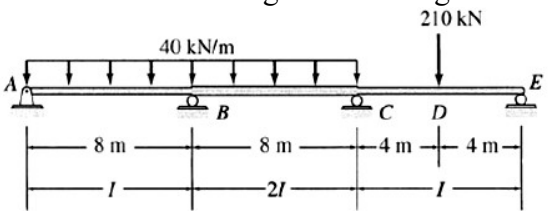


Fig.1

2. Analyse the continuous beam shown in Fig.2 using moment distribution method. EI is constant. Draw the shear force and bending moment diagrams.

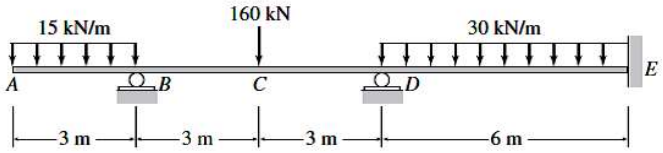


Fig.2

3. Draw the bending moment diagram of a three-pinned circular arch shown in Fig.3.Also determine the horizontal thrust and radial shear at a distance of 5m from the left-hand support.

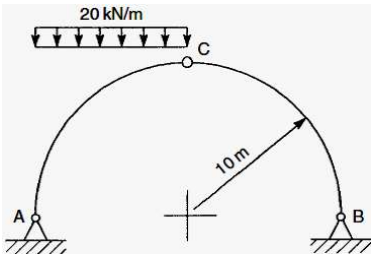


Fig.3

4. Find the deflection at centre and slopes at the supports for a simply supported beam of span 4m with uniformly distributed load of intensity 6kN/m using moment-area method.

5. Draw the shear force and bending moment diagram for a propped cantilever beam of span 6m with two point load 4kN and 6kN acting at a distance of 2m and 4m from fixed end.

6. State the assumption in the theory of simple bending and derive M/I=f/y=E/R

7. Draw the shear stress distribution for a symmetrical I-section with thickness of the web as 12mm, thickness of the flange as 12mm, overall depth of the section as 350mm and width of the flange as 200mm if the beam is subjected to a shear force of 20kN.

8. An unsymmetrical I-section beam is used to support an imposed load of 2kN/m over a span of 8m. The beam is additionally subjected to a compressive force **P** of 100kN located at 50mm from the soffit of the beam (Fig.1). Determine the extreme fibre stresses at mid span section. The sectional details are top flange, 300mm wide 60mm thick; thickness of the web= 80mm; overall depth of the beam = 400mm.

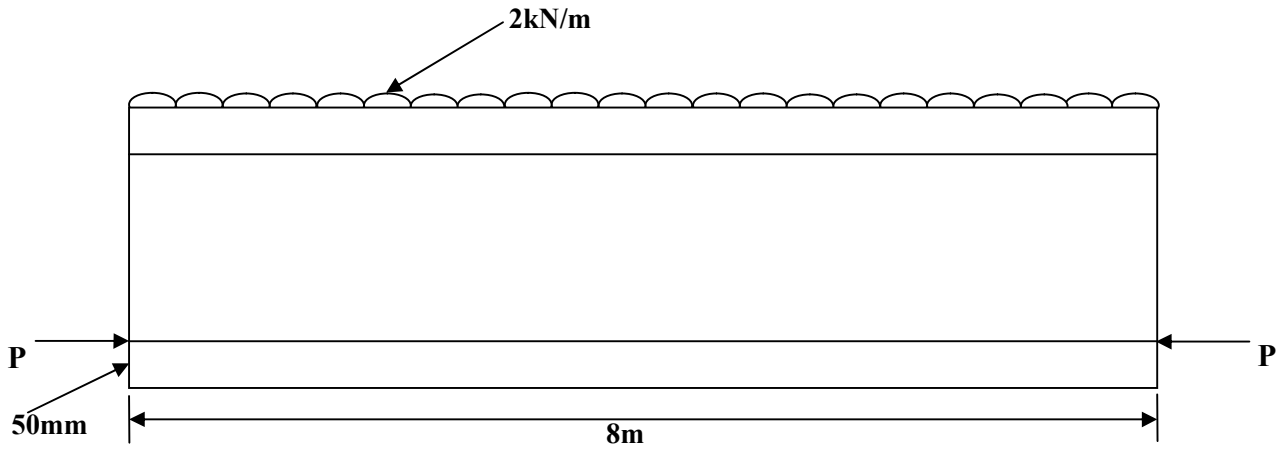


Fig.1

DEDEPARTMENT OF ARCHITECTURE
AU COLLEGE OF ENGINEERING
I/V B. Arch. Degree Examination

MODEL QUESTION PAPER
ENGLISH LANGUAGE LAB
(Effective from the admitted batch of 2020-2021)

SECOND SEMESTER

Max. Marks: 50

VIVA-VOCE EXAMINATION

ARC2105
CLIMATOLOGY -I

MODEL QUESTION PAPER

(W.E.F 2020-2021 Admitted Batch)

Time: 3 Hrs. Max. Marks: 70M

Answer any **FIVE** Questions

All question carry **Equal** Marks

1	Distinguish between the following	14 Marks
	a. Macro climate and micro climate.	7 Marks
	b. Conductive heat transfer and convective heat transfer.	7 Marks
2	Write short notes on the following.	14 Marks
	a. Induced ventilation	4 Marks
	b. Mahoney Tables	4 Marks
	c. Day lighting	3 Marks
	d. Comfort charts	3 Marks
3	What is the main cause of the global wind pattern on earth? Name the important instruments used to record data on the weather.	14 Marks
4	Briefly describe the shelter design characteristics in hot-dry climate with the help of neat sketches.	14 Marks
5	Explain the role of thermal comfort factors in determining the comfort zone. Explain body heat balance indicating the heat loss and heat gain factors.	14 Marks
6	Describe the various processes by which heat balance of the human body is maintained.	14 Marks
7	Explain the reasons for the variation in the design of building envelop, if the building is located at New Delhi and Trivandrum.	14 Marks
8	Evaluate the effect of the use of modern construction materials on human comfort.	14 Marks

ARC2106

STRUCTURAL MECHANICS-III

MODEL QUESTION PAPER

(W.E.F 2020-2021 Admitted Batch)

Time: 3 Hrs. Max. Marks: 70M

Answer any **FIVE** Questions

All questions carry **Equal** marks

1. Find the Euler's collapse load for a column with bottom fixed and top hinged. Also specify the equivalent length of the column.

2. A 2.0m long pin ended column of square cross section is to be made of wood. Assuming E=12 GPa and allowable stress being limited to 12 MPa. Determine the size of the column to support 200 kN safely. Use factor of safety of 3.0 and Eulers crippling load for buckling.

3. A short column of rectangular section 400mm X 200mm is constructed of a material with a maximum permissible compressive stress of 90 MPa and tensile stress of 25 MPa. If the compressive load is 1500 kN, at what eccentricity can it be applied along the two principal axes.

4. Draw the influence line diagram for reactions at both the supports for a simply supported beam of span 6.0m. Also draw the influence line diagram for Shear force and Bending moment at section 2.0 m from the left end if 3.0 kN/m of length greater than the span is moving over the beam.

5. Figure 1 shows a section of gravity retaining wall. In the top 3.0 m soil is dry and below this level soil is water logged. Calculate the maximum pressure on the base of the wall. Density of dry soil is 16 kN/m^3 and density of submerged soil is 11 kN/m^3 and angle of repose is 30°. Density of masonry is 24 kN/m^3.

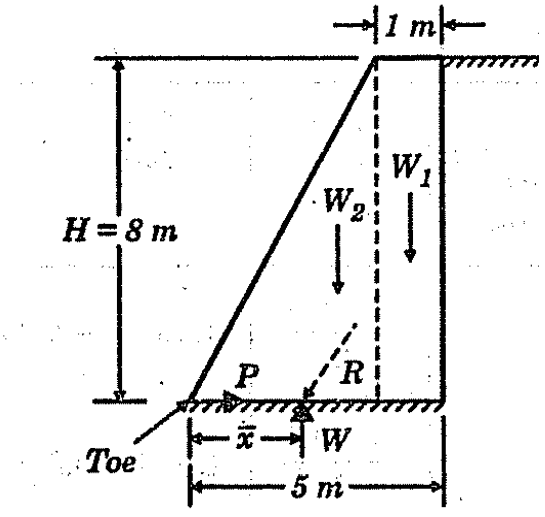


Figure 1

6. (a)Explain in detail plastic bending of beams. [7]

(b)Find the shape factor and plastic moment of capacity of a T-section 100mm X 12mm flange and 180mm X 10mm web. Assume f_y = 250 MPa. [7]

7. (a)Upper and Lower bound theorems. [6]

(b) Determine the collapse load for a portal frame of uniform cross section as shown in Figure 2. [8]

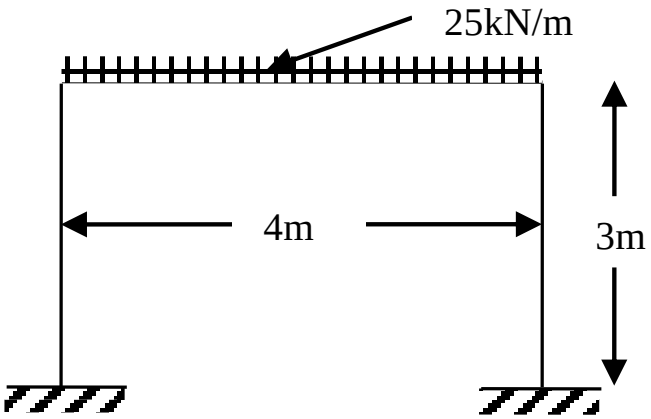


Figure 2

8. Write short notes on:
   (a) Rankine's Equation [3]
   (b) Load factor [3]
   (c) Plastic Hinge [4]
   (d) Coloumb's theory [4]

ARC2102
HISTORY OF ARCHITECTURE-II

MODEL QUESTION PAPER

(W.E.F 2020-2021 Admitted Batch)

Time: 3 Hrs. Max. Marks: 70M

Answer any **FIVE** Questions

All questions carry **Equal** Marks

1. Write the following with neat sketches

   a) Explain the City Planning and organization of any two towns of Harappa civilization. 7 MARKS

   b) What are the Vastu shastra recommendations for planning a city during Vedic period. 7 MARKS

2. Explain the following with neat sketches

   a) What is Mahayana and Hinayana? 4 MARKS
   b) What are Caves, and Viharas in Buddhist Architecture? 4 MARKS
   c) Explain the parts of Stupa. 3 MARKS
   d) Write notes on elements of Jain Architecture. 3 MARKS

3. Write short notes on the following:

   a) Ladh Khan Temple. 7 MARKS
   b) Temple at Deogarh. 7 MARKS

4. Explain the various parts of an Orissa temple. Explain in detail any two Orissa temples. 14MARKS

5. Explain in detail any two styles of South Indian temple Architecture. 14 MARKS

6. Explain in detail important features of Indo-Islamic Architecture. 14 MARKS

7. Write short notes on the following:

   a) Tughlaq Dynasty. 7 MARKS
   b) Provincial Styles of Gujarat. 7 MARKS

8. Write short notes on the following:

   a) What are the characteristic features of Mughal architecture? 7 MARKS
   b) Write short notes on famous buildings of Mughal style. 7 MARKS

ARC2103

BUILDING MATERIALS & CONSTRUCTION -III

MODEL QUESTION PAPER

(W.E.F 2020-2021 Admitted Batch)

Answer any **ONE** question from Part-1

Answer any **THREE** questions from Part-2

Time: 3Hrs. Max. Marks: 50M

Part – 1

1. Design and draw Plan & Section of an open well staircase for an office building, the building height is 10.8M high and floor to floor height of the building is 3.6M. The size of the stair hall is limited to 5.0M X 5.0M. state the reasons for the width, riser and tread adopted for the stair. Adopt Suitable scale. 20 Marks

2. A column of 230MM X 345MM has to provide with an RCC Footing 1500MM X 1800MM and 1800MM deep. Assuming necessary reinforcement diameters for mat, and column, spacing and grade mix. Draw suitable scale. 20 Marks
   a) Plan
   b) Section

Part-2

3. Write a short note on the following
   a) Concrete grades and setting process 5 Marks
   b) Suitable foundation types for very low SBC values 5 Marks

4. State the difference between one-way slab and two-way slab. Show a sketch of plan and sections of one-way slab and two-way slab, mention standard sizes, spacing and grade mix details. 10 Marks

5. What is scaffolding? Mention its various components. Name the different types of scaffolding and describe them with neat sketches. 10 Marks

6. State the principal causes of unequal settlement of structures and mention the precautions to be taken to prevent uneven settlement. 10 Marks

7. Write a short note on the following

   a) Requirements of good staircase 5 Marks
   b) Terminology used in staircase – Sketches 5 Marks

ARC2104

BUILDING SERVICES-I

((WATER SUPPLY & SANITARY ENGINEERING)

MODEL QUESTION PAPER

(W.E.F 2020-2021 Admitted Batch)

Time: 3 Hrs. Max. Marks: 70M

Answer any **FIVE** Questions

All questions carry **Equal** Marks

1. Briefly explain the importance of water for all life in general and types of sources of water supply.

2. Briefly explain the following
   a) Impurities in water 3 Marks
   b) Qualities in Potable water 3 Marks
   c) Coagulation of water 4 Marks
   d) Bacteriological test of Water 4 Marks

3. Briefly explain the different types of water distribution network in supply of water from storage reservoirs with neat sketches.

4. Write a short note on the following

   a) Guidelines for laying of water mains under roads 7 Marks
   b) Water supply to high rise buildings: problems encountered & systems adopted. 7 Marks

5. Briefly explain about conservancy method and water -carriage system along with their advantages and disadvantages.

6. Briefly explain about the principles of house drainage system. State the differences between one pipe and two pipe system of building sanitation.

7. Write a short note on the following

   a) Inspection chamber and gully trap 4 Marks
   b) Requirements of good trap 3 Marks
   c) Rainwater harvesting systems 3 Marks
   d) Ventilation of sanitary systems 4 Marks

8. Explain the following with good examples
   a) Design calculations of septic tank 7 Marks
   b) Water demand calculation for overhead water tanks 7 Marks

ARC2101
ARCHITECTURAL DESIGN -II

MODEL QUESTION PAPER

(W.E.F 2020-2021 Admitted Batch)

Time: 10 Hrs. Max. Marks: 50M

(NURSERY SCHOOL)

Nursery school has become a stepping stone in today's context of educational needs of the society. In this context of educational needs, a renowned Private educational Organisation is intending to construct a nursery school in a housing colony.

It was decided to design the nursery school in a site admeasuring 40X50 ms with shorter side abutting a 12m wide road and is facing towards east side.

Following are the Requirements:

1. Classrooms -- 2nos – 30 sq.m
2. Indoor Play area—1no.—80sq.m
3. Toilets -- Girls and boys—3no.s each
4. Wash basins – 6 nos
5. Staff Room with a Toilet – 30sqm
6. Office room with toilet – 30sqm
7. Principal room with toilet_30sqm
8. Store Room – 15sqm
9. Restroom – 15 sqm

Drawings to be submitted

a) Site plan -- 1:100
b) Floor Plans -- 1:50
c) Front Elevation and a section -- 1:20
d) Furniture layout of a class room -- 1:20
e) Perspective

ARC2203

BUILDING MATERIALS & CONSTRUCTION -IV

MODEL QUESTION PAPER

(W.E.F 2020-2021 Admitted Batch)

Answer any ONE question from Part-1

Answer any THREE questions from Part-2

Time: 3Hrs. Max. Marks: 50M

Part – 1

1. Draft the details of false ceiling for an entrance lounge of a hotel of size 9.0M X9.0M. The drawings should include reflective ceiling plan, plan showing grid of metal framing system as per your ceiling design (Mention the standard sizes used for metal framing system), sections and any two details. 20 Marks

2. Draft or sketch, plan, section and any two details of large span roof truss. (Also mentions its standard sizes, and advantages of the roof truss from others. 20 Marks

Part-2

3. Write a short note on the following
   a) Types of aluminium and wooden partitions 5 Marks
   b) Triple layered tubular space frames 5 Marks

4. Briefly explain what are the different types of cladding materials used for buildings and structures in the market. State its advantages and disadvantages. 10 Marks

5. Write a short note on the following

   a) Necessary of damp proofing for buildings and mention the general damp proofing materials used. 5 Marks
   b) Which steel roof truss would you suggest for an industrial shed, Show some sketches. 5 Marks

6. Discuss why acoustical treatment is necessary for buildings (Mention the building Or spaces typology). Mention any four acoustical materials generally used for good absorption coefficient and noise control. 10 Marks

7. Write a short note on the following

   a) Use of glass as building material in contemporary buildings (Discuss both advantages and disadvantages 5 Marks
   b) Sketch the details showing fixing and connections of various steel sections. 5 Marks

ARC2201
ARCHITETURAL DESIGN-III

MODEL QUESTION PAPER

(W.E.F 2020-2021 Admitted Batch)

Time: 10 Hrs. Max. Marks: 50M

(Office Cum Residence)

An office cum residence is to be designed in a plot of 25mX40m. the shorter side is facing a 18m south road. An architectural office and family of six i.e grandparents, parents and children(a boy and a girl).

Following are the requirements of the Project:

For office space

a) Reception 10sqm
b) Principal Architects Room 30sqm
c) Drafting room for Six persons 50sqm
d) Conference room/ presentation room 60sqm
e) Library 30sqm
f) Pantry and dining space 30sqm
g) Toilet 6sqm
h) Rest room 10sqm
i) Store room 10sqm

For Residence

j) Drawing room 20sqm
k) Living room 40sqm
l) Dining room 20sqm
m) Kitchen with store utility 30sqm
n) 5 Bed rooms with attached toilets and walk in wardrobe each ranging from 20sqm to 40sqm (please decide according to the individuals need)
o) Home theatre 50 sqm
p) Laundry 20 sqm

Space to be provided for Tool room (for garden equipment and house hold equipment)

And a servant's quarters of 40 sqm having a toilet and kitchen counter need to be provided.

Drawings to be submitted

a) Site plan -- 1:200
b) Floor Plans -- 1:100
c) Front Elevation and section -- 1:100
d) Furniture layout for any of a chosen room -- 1:50
e) Perspective

ARC2202

HISTORY OF ARCHITECTURE-III

MODEL QUESTION PAPER

(W.E.F 2020-2021 Admitted Batch)

Time: 3 Hrs. Max. Marks: 70M

Answer any **FIVE** Questions

All questions carry **Equal** marks

1. Write the following with neat sketches
   a) Explain about the industrial revolution and the impact on building materials and construction during that period. 7 MARKS
   b) Discuss about the contributions of Tony Garnier in late Renaissance. 7 MARKS

2. Write about the following:

   a) Le Art Nouveau movement. 4 MARKS
   b) Balloon Frame Structure. 4 MARKS
   c) Plane Surfaces in America. 3 MARKS
   d) Victor Horta H.P. Berlage. 3 MARKS

3. Discuss about the following:

   a) Chicago School: Louis Sullivan. 7 MARKS
   b) Organic Architecture. 7 MARKS

4. Le Corbusier's contribution towards architecture in India, support your answer along with details and examples. 14MARKS

5. Discuss about the works done by Walter Gropius. 14MARKS

6. Discuss about the works done by Louis I Khan with examples. 14MARKS

7. Discuss about the contributions of the following Architects to the field.

   a) Frank O. Gehry 7 MARKS
   b) I. M. Pei 7 MARKS

8. Discuss the theories and contribution of architect B. V. Doshi. 14MARKS

ARC2204
BUILDING SERVICES-II
(ACOUSTICS)

MODEL QUESTION PAPER
(W.E.F 2020-2021 Admitted Batch)

Time: 3 Hrs. Max. Marks: 70M

Answer any **FIVE** questions

All questions carry **Equal** marks

1. Differentiate between Greek and Roman Amphitheatres with neat sketches and examples. 14 Marks

2. Write a short note on
   a) Reverberation 3 Marks
   b) Flutter Echo 4 Marks
   c) Noise Reduction Coefficient 4 Marks
   d) Attenuation 3 Marks

3. Explain the Term Sound Absorption and Sound Absorption Coefficient. Discuss in detail the characteristics of typical sound absorbers. 14 Marks

4. Write the following with neat sketches

   a) Lindsay's wheel of acoustics 7 Marks
   b) Classification of sound waves 7 Marks

5. Calculate the RT for a lecture hall 11M (L) X 13M (B) X 4.2M (H) which is 1/3 occupied and seating capacity is 85. All walls are masonry walls with 12MM with fibre board of solid backing with absorption coefficient 0.15, Flooring – sheet rubber hard surface 6MM thick with absorption coefficient 0.05, Acoustical Ceiling is 3.5M high from the floor level with absorption coefficient 0.60 and absorption coefficient of occupied and unoccupied seating is 0.60 and 0.45. 14 Marks

6. Explain the behaviour of a sound in an enclosed space. How do shape and volume of the room affect acoustical performance? 14 Marks

7. Discuss on any four Contemporary acoustical building materials currently in use for noise control along with its uses and its applications. 14 Marks

8. Briefly explain Acoustic requirements and space design requirements for conference and board rooms with neat sketches. 14 Marks

ARC2205
CLIMATOLOGY-II

MODEL QUESTION PAPER

(W.E.F 2020-2021 Admitted Batch)

Time: 3 Hrs. Max. Marks: 70M

Answer any **FIVE** Questions

All questions carry **Equal** Marks

1 Write short notes on the following
   a. Design of chajja in different regions of India. (7 M)
   b. Write short notes on skylight (7 M)

2 Write short notes on the following.
   a. Dehumidification (4 M)
   b. Stack effect (4 M)
   c. Evaporative cooling (3 M)
   d. North light (3 M)

3 Elaborate on Sun control through various elements of building. (14M)

4 What do you understand by “passive methods of cooling”? Explain any two methods in detail with sketches. (14M)

5 List the different simulation program software and their application. (14M)

6 Briefly discuss the significance of GRIHA rating system. (14M)

7 Describe the basic concept of “vertical shadow angle”. Assuming suitable data about the position of opening and orientation of wall, explain how the concept can be used to design a horizontal shading device to protect a given opening from direct solar radiation. (14M)

8 Discuss the Effect of built environment on air movement and ventilation. (14M)

ARC2206
DESIGN OF STRUCTURES -I

MODEL QUESTION PAPER

(W.E.F 2020-2021 Admitted Batch)

Time: 3 Hrs. Max. Marks: 70M

Answer any **FIVE** Questions
All questions carry **Equal** Marks
(IS 456: 2000 is allowed in Examination)

1.
   a) Draw Stress-strain relationship for steel. [4]
   b) Design a singly reinforced beam to carry a live load of 14.5 kN/m. The clear span of the beam is 5.5 m. The bearing at each end is 300 mm. Use M20 concrete and Fe415 steel. [10]

2.
   a) A rectangular section 250 mm X 550 mm overall is to be designed as a doubly reinforced beam for a factored moment of 225 kNm. Use M20 and Fe415 steel. [7]
   b) Design a cantilever beam with a clear span of 2.5 m which carries a superimposed load of 20 kN/m. Use M15 mix and mild steel. [7]

3.
   a) What are the factors affecting shear strength of concrete? [4]
   b) A rectangular beam of size 230 mm width and 450 mm effective depth is reinforced with four bars of 20 mm diameter. Determine the required vertical shear reinforcement to resist the factored shear force of 250 kN. Consider concrete of grade M25 and steel of grade Fe 415. [10]

4.
   a) What are the general considerations for design of slabs? [4]
   b) Design a simply supported RCC slab for a roof of a hall 4 m X 10 m (inside dimensions) with 230 mm walls all around. Assume a live load of 4 kN/m^2 and finish 1.0 kN/m^2. Use M25 grade concrete and Fe415 grade steel. [10]

5.
   a) Briefly discuss the behaviour of short columns. [4]
   b) Design a column having on effective length of 4.75 m to support a factored load of 1650 kN. Consider the reinforcement ratio to be in the range of 1.5 and 2.0 percent and the effective cover to longitudinal steel of 55 mm. Use M25 grade concrete and Fe415 grade steel. [10]

6. Design a Reinforced concrete isolated footing for a column of size 450 mm X 450 mm transmitting an axial load of 1200 kN and uniaxial bending moment of 450 kNm at service state. Unit weight of soil is 19 kN/m^3, Bering capacity of soil is 150 kN/m^2 and angle of repose is 30^0. Use M20 concrete and Fe415 steel. [14]

7. Design the Dog-legged reinforced concrete staircase for an office building. Given height between floor=3.2 m, riser=160 mm, tread=270 mm, width of flight=width of landing= 1.25 m. Assume stair to be supported on 230 mm thick wall at the outer edges of landings. Use M20 concrete and Fe 415 steel. [14]

8. Write short notes on:
   (a) Limit state method [3]
   (b) Briefly explain the type of loads and load combinations. [4]
   (c) Soil Pressure under Footings [4]
   (d) Loads on Stair Slabs [3]

ARC2207

ENVIRONMENTAL SCIENCE FOR ARCHITECTURE

MODEL QUESTION PAPER

(W.E.F 2020-2021 Admitted Batch)

Time: 3 Hrs. Max. Marks: 70M

Answer any **FIVE** Questions

All questions carry **Equal** Marks

1	Write short notes on the following	(2X7=14M)
	a. Chipko Movement	(7 M)
	b. Narmada Bachao Andolan	(7 M)
2	Write short notes on the following.	14M
	a. Rain water harvesting	(4 M)
	b. nuclear hazard	(4 M)
	c. EIA	(3 M)
	d. In-situ conservation of biodiversity	(3 M)
3	Discuss the structure and function of ecosystems.	(14M)
4	Elaborate on habitat loss and threats to biodiversity caused by human activities.	(14M)
5	What is municipal solid waste? What are the ways of solid waste disposal?	(14M)
6	Write a detailed note on man induces landslides and ways to prevent them.	(14M)
7	What are the urban problems related to energy? Explain.	(14M)
8	Give the salient features of Environment Protection Act.	(14M)

ARC3101
ARCHITECTURE DESIGN-IV

III /V B.Arch. DEGREE EXAMINATION
First semester
B.ARCHITECTURE

MODEL QUESTION PAPER
(VIVA-VOCE)
(W.E.F. 2020-21 Admitted Batch)

Time: VV Hrs. Marks: 50M

VIVA-VOCE

ARC3102
HUMAN SETTLEMENTS & TOWN PLANNING

III /V B.Arch. DEGREE EXAMINATION
First semester
B.ARCHITECTURE

MODEL QUESTION PAPER
(W.E.F. 2020-21 Admitted Batch)

Time: 3 Hrs. Max Marks: 70M

Answer any **FIVE** questions
All Questions Carry Equal Marks

1. Write a detailed note on the visionaries of the following planners
    a) Patrick Geddes
    b) Ebenezer Howard

2. Illustrate the Structure and form of human settlements.

3. Discuss the physical differences and relationship between rural and urban settlement.

4. Enlist and brief about the town planning organizations in India at national and regional levels.

5. Discuss the following concepts
    a) Urban renewal
    b) Master plan

6. Discuss the policies and programs for housing and slum development followed in Andhra Pradesh.

7. Answer the following
    a) SEZ
    b) smart cities

8. Discuss the best possible modes of mass transportation. Also brief about TOD.

ARC3103

LANDSCAPE DESIGN & SITE PLANNING

III /V B.Arch. DEGREE EXAMINATION
First semester
B.ARCHITECTURE

MODEL QUESTION PAPER
(W.E.F. 2020-21 Admitted Batch)

Answer any **FIVE** questions
All Questions Carry Equal Marks

Time: 3 Hrs. Max Marks: 70M

PART A
Compulsory question carries 30m

1. Design a neighbourhood park measuring 80X60m surrounded by 12m roads in a residential neighbourhood. Using the various elements of design and reflecting on the principles in landscape.

   Discuss the concept and draw a plan. **15m**

   Sketch any five details **3X5=15m**

PART B
Answer any Four 4X10= 40m

2. Discuss in detail the garden styles of English garden with neat sketches.
3. What is the process of identifying the various factors to be considered while evaluating a site? Discuss with relevant examples.
4. What are the elements of landscape design? With neat sketches illustrate the role of the elements.
5. Describe the types of various planting materials and their role in landscape. Elaborate with sketches.
6. Discuss lighting in the landscape design with examples and sketches.
7. Write short notes on any two: 1. Biophilic design 2. Mughal garden 3. sprinkler systems

ARC3103

LANDSCAPE DESIGN & SITE PLANNING

III /V B.Arch. DEGREE EXAMINATION
First semester
B.ARCHITECTURE

MODEL QUESTION PAPER
(W.E.F. 2020-21 Admitted Batch)

Answer any **FIVE** questions
All Questions Carry Equal Marks

Time: 3 Hrs. Max Marks: 70M

ARC3102
BUILDING MATERIALS & CONSTRUCTION - V
MODEL QUESTION PAPER
(W.E.F. 2020-21 Admitted Batch)

III /V B.Arch. DEGREE EXAMINATION
First semester
B.ARCHITECTURE

Time: 3 hours Max. Marks: 50

Answer any **ONE** question from Part 1
Answer any **THREE** question from Part 2

PART 1

(20 Marks)

1. What is shell structure? Sketch any 4 different forms & types of shell structures and discuss its application, advantages & disadvantages of shell structure.

2. Why only high strength concrete and high tensile steel are used in prestressed concrete? Discuss the advantages and disadvantages of prestressed concrete over reinforced concrete.

PART 2

(30 Marks)

3. Write short notes on the following
    a) Classification of prefabricated components
    b) Skeleton frame works (space frames)

4. Discuss briefly on commercially available systems like Space Deck System, Triodetic System, Geodesic Domes along with its applications and advantages.

5. Write short notes on the following
    a) Concrete for Seismic design
    b) Skeleton frame works (space frames)

6. Provide a concise explanation of the design and application of tensile structures, as well as the benefits and drawbacks associated with using them.

7. Discuss in brief the latest developments in 3D printing technology that are being utilised for the construction of buildings, and then describe both the benefits and the risks of using 3D printers in the construction industry.

ARC3105

BUILDING SERVICES -III
(ELECTRICAL and HVAC SERVICES)

MODEL QUESTION PAPER
(W.E.F. 2020-21 Admitted Batch)

III /V B.Arch. DEGREE EXAMINATION
First semester
B.ARCHITECTURE

Time: 3 Hrs. Max Marks: 70M

Answer any **FIVE** questions
All Questions Carry Equal Marks

1. Explain in detail the methods of lighting which are source based. Explain with the support of examples you experience everyday
2. Suggest the type of Air Conditioning system that can used in a commercial space for a software office of area 2800 Sqft which is located on the first floor that is structurally supported with columns , having only the external walls.
3. Explain in detail the process of electricity supply for a residential area alongwith the stages involved during the process.
4. Explain the terms in brief:
    a) Chillers and coolers
    b) Aesthetic lighting
    c) HT and LT
5. Explain in detail:
    a) The different types of connections of electricity supply
    b) The functioning of Central Air Conditioning system for a shopping mall
6. Explain briefly about
    a) Different kinds of architectural lighting
    b) Safety lighting
    c) Compressor and refrigerant
    d) Flux and candela
7. Explain in detail the different electrical devices used in a residential building of 30’X 45’ with a living, 2 bed rooms, kitchen and 2 toilets with a balcony and utility. Support with a neat electrical layout.
8. Brief about the following terms
    a) Recessed lighting
    b) Packaged air conditioning system
    c) Alternative energy sources of electricity.

ARC3106

III /V B.Arch. DEGREE EXAMINATION

First semester

ARCHITECTURE

MODEL QUESTION PAPER

DESIGN OF STRUCTURES-II

(Effective from the admitted batch of 2020-2021)

(IS 800-2007 CODE BOOK, STEEL TABLES are allowed for Examinations)

TIME: Three Hours **Maximum Marks: 70**

Answer any FIVE Questions

All Questions carry equal marks.

1. Two flats (Fe 410 grade steel), each 210 mm X 8 mm, are to be jointed using 20 mm diameter,4.6 grade bolts, to form a Lap joint. The joint is supposed to transfer a factored load of 250 kN. Design the joint and suitable pitch for the bolts.
2. A tie member consists of an ISA 80 mm X 50 mm X 8 mm (Fe 410 grade steel) is welded to a 12 mm thick gusset plate at site. Design welds to transmit load equal to the design strength of the member.
3. Design a tension member to carry a pull of 830 kN. The member is 3.2 m between c/c of intersections. Design the member using channel section.
4. A simply supported steel joist of 4.0 m effective span is laterally supported throughout. It carries a total uniformly distributed load of 40 kN (inclusive of the self weight). Design an appropriate section using steel of grade Fe 410.
5. Design a column 3.5 m long, in a building, subjected to a factored load of 550 kN. Both the ends of the column are effectively restrained in direction and position. Use steel of grade Fe 410.
6. Design a built-up column 10 m long to carry factored axial load of 1080 kN. The column is restrained in position but not in direction at both the ends. Provide single lacing system with bolted connections. Assume steel of grade Fe 410 and bolts of grade 4.6.
7. A column ISHB 350@661.2 N/m carries an axial compressive factored load of 1700 kN. Design a suitable bolted gusset base. The base rests on M15 grade concrete pedestal. Use 24 mm diameter bolts of grade 4.6 for making the connections.
8. Write short notes on:
   a) Advantages and disadvantages of steel as structural material
   b) Rolled steel sections
   c) What are the different types of failure of bolted joints? Give sketches.

ARC3105

OPEN ELECTIVE -I
(ENVIRONMENTAL IMPACT ASSESSMENT)

MODEL QUESTION PAPER
(W.E.F. 2020-21 Admitted Batch)

III /V B.Arch. DEGREE EXAMINATION
First semester
B.ARCHITECTURE

Time: 3 Hrs. Max Marks: 70M

Answer any **FIVE** questions
All Questions Carry Equal Marks

1. Identify and discuss the most important theoretical steps involved in the process of preparing an EIA. Any step of the EIA process can be discussed in greater detail.

2. How can environmental impact assessments (EIAs) be used as a component of regional sustainable development strategies? Provide examples to support your statement.

3. Who, in your opinion, are the most important stakeholder groups in a large-scale project in India, such as the construction of a dam, what are the dynamics that exist between stakeholders and the government, and what role can EIA play in such a project?

4. Write a short note on the following
   a) Weighed Matrix Method 7 Marks
   b) Checklist Method 7 Marks

5. Explain in detail the socio-economic impacts usually encountered due to development.

6. Briefly explain Evolution of EIA in India. Give details of environmental clearance process in India with time involved in each step.

7. Discuss briefly why public participation is necessary as part of the EIA process. Give an example of how a notice for a public hearing will be prepared as a part of the procedure for seeking environmental clearance.

8. Explain
   a) PRA techniques 3.5 Marks
   b) Screening in EIA 3.5 Marks
   c) EMP 3.5 Marks
   d) Biodiversity 3.5 Marks

ARC3201
ARCHITECTURE DESIGN-V

III /V B.Arch. DEGREE EXAMINATION
Second semester
B.ARCHITECTURE

MODEL QUESTION PAPER
(W.E.F. 2020-21 Admitted Batch)

Time: VV Hrs. Marks: 50M

VIVA-VOCE

ARC3202
WORKING DRAWINGS-I

III /V B.Arch. DEGREE EXAMINATION
Second semester
B.ARCHITECTURE

MODEL QUESTION PAPER
(VIVA-VOCE)
(W.E.F. 2020-21 Admitted Batch)

Time: Marks: 50M

VIVA-VOCE

ARC3203
SPECIFICATIONS, ESTIMATING AND COSTING

III /V B.Arch. DEGREE EXAMINATION
Second semester
B.ARCHITECTURE

MODEL QUESTION PAPER
(W.E.F. 2020-21 Admitted Batch)

Time: 3 Hrs. Max Marks: 70M

Answer any FOUR Questions in **PART –A** 10 Marks each
PART-B is Compulsory, 30 Marks

PART-A

1. (a)Define specification and importance of writing Specification? [5 Marks]
(b)Explain in detail the brief specification for I class building. [5 Marks]

2) .(a)What is Detailed Estimate? Explain in detail [5Marks]
b) Write the method of calculation for any 3main items of work in estimation. [5Marks]

3) Find the cost of one Cubic meter quantity of the following
a) 1: 4 Cement Mortar [5Marks]
b) 1: 2: 4 Cement Concrete [5Marks]

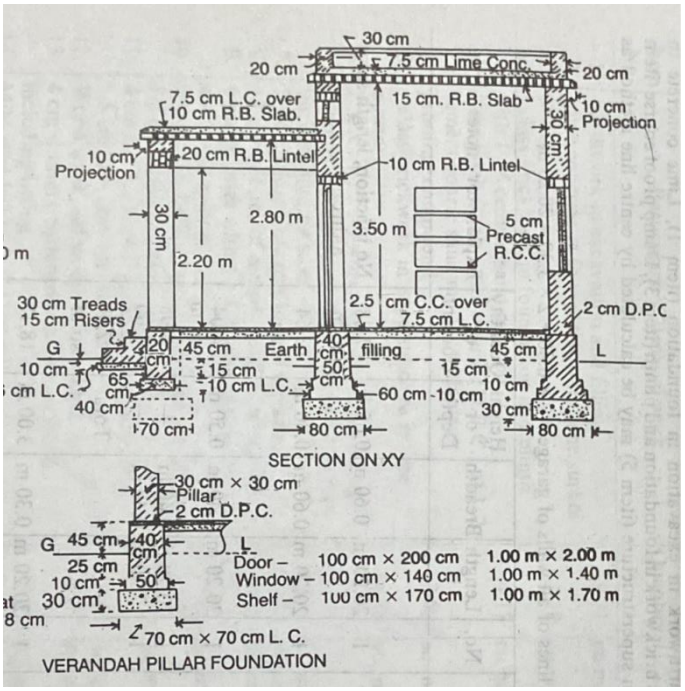
4. a) What do you understand about the contract document and explain?
b) Define Tender and explain about Tender process?

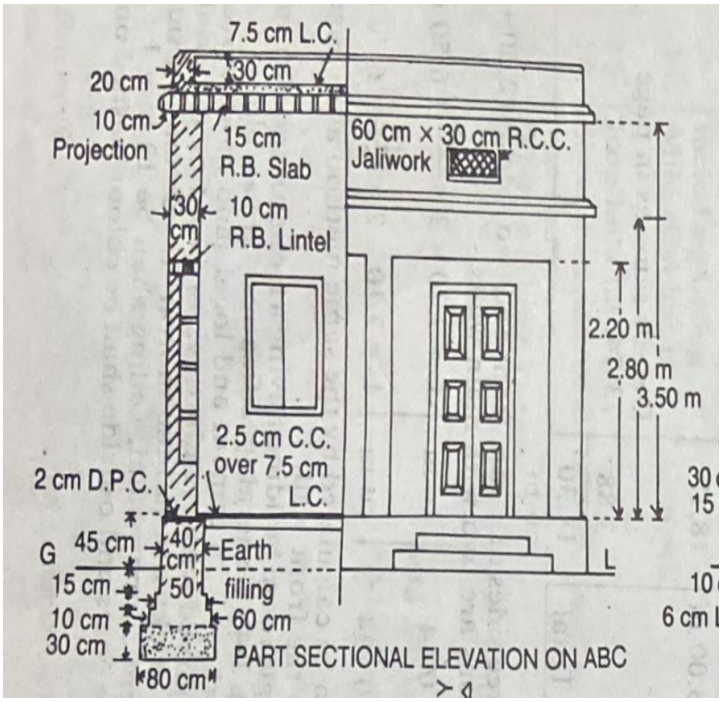
5. Write a short note on the following
a) Value b) analysis of rate
d) Lumpsum cost d) Revised Estimate

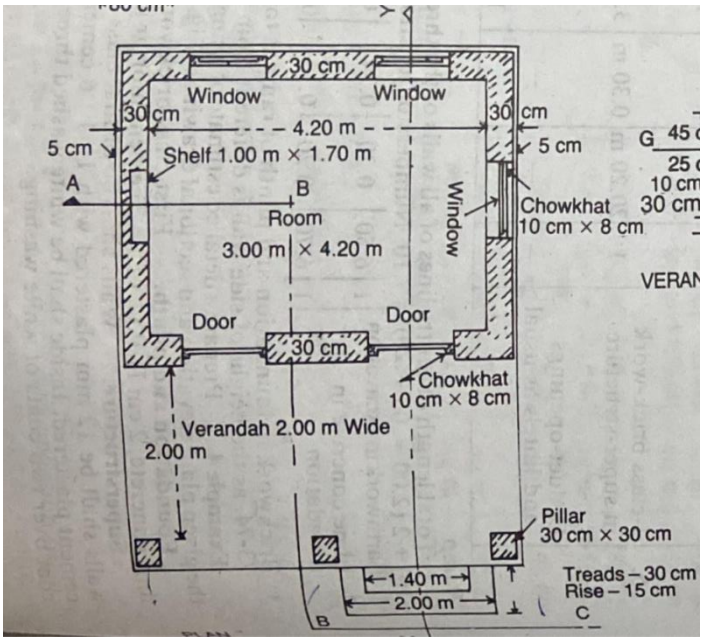
PART-B

6. Prepare a detailed estimate of a building having a front verandha from the given plan, elevation and sectional drawing (fig.1). General specifications are as follows: -
a) Earth work in excavation in foundation,
b) First class brickwork in lime mortar in foundation and plinth
c) 2.5 cm damp proof course
d) First class brickwork in 1:6 cement mortar in superstructure

P.T.O


30 cm
20 cm
7.5 cm Lime Conc.
20 cm
7.5 cm L.C. over
10 cm R.B. Slab.
15 cm. R.B. Slab
10 cm
Projection
30 cm
10 cm
Projection
20 cm R.B. Lintel
10 cm R.B. Lintel
30 cm
2.80 m
3.50 m
5 cm
Precast
R.C.C.
2.20 m
30 cm Treads
15 cm Risers
2.5 cm C.C. over
7.5 cm L.C.
2 cm D.P.C
G
20 cm
45 cm
Earth filling
40 cm
50 cm
45 cm
L
10 cm
15 cm
15 cm
65 cm
10 cm L.C.
10 cm
cm L.C.
60 cm
10 cm
40 cm
30 cm
70 cm
80 cm
80 cm
SECTION ON XY
30 cm × 30 cm
Pillar
2 cm D.P.C.
G
45 cm
40 cm
L
25 cm
10 cm
50
30 cm
8 cm
70 cm × 70 cm L. C.
Door – 100 cm × 200 cm 1.00 m × 2.00 m
Window – 100 cm × 140 cm 1.00 m × 1.40 m
Shelf – 100 cm × 170 cm 1.00 m × 1.70 m
VERANDAH PILLAR FOUNDATION


7.5 cm L.C.
30 cm
20 cm
10 cm
Projection
15 cm
R.B. Slab
60 cm × 30 cm R.C.C.
Jaliwork
30 cm
10 cm
R.B. Lintel
2.20 m
2.80 m
3.50 m
2.5 cm C.C.
over 7.5 cm
L.C.
2 cm D.P.C.
G
45 cm
40 cm
Earth
L
15 cm
50
filling
10 cm
60 cm
30 cm
80 cm
PART SECTIONAL ELEVATION ON ABC


30 cm
Window
Window
30 cm
30 cm
4.20 m
5 cm
Shelf 1.00 m × 1.70 m
5 cm
A
B
Room
3.00 m × 4.20 m
Window
Chowkhat
10 cm × 8 cm
Door
Door
30 cm
Chowkhat
10 cm × 8 cm
Verandah 2.00 m Wide
2.00 m
Pillar
30 cm × 30 cm
1.40 m
2.00 m
Treads – 30 cm
Rise – 15 cm
B
C

Plan

III /V B.Arch. DEGREE EXAMINATION
Second semester
B.ARCHITECTURE

ARC3204
MODEL QUESTION PAPER
BUILDING REPAIRS AND MAINTENANCE SERVICES
(Effective from the admitted batch of 2020-2021)

Time: 3 hours Max. Marks: 70

Answer any **FIVE** questions
All question carry **EQUAL** marks

1. Write the details of Ant termite Treatment of buildings; both preconstruction and post construction. What are the problems caused by termite attack in a building?

2. What are the factors that contribute to efflorescence, and how does it effect a structure? What kinds of general problems can arise when there is movement of moisture inside a building?

   Suggest a treatment in details that can eliminate and / or eradicate both dampness and efflorescence of a wall at a time.

3. What are the types of cracks we find in a building? What are the possible causes of it? How to repair the various cracks especially in case of load bearing brick-built structures?

4. Write in details the normal routine maintenance that are necessary for general upkeeping of a building. How can we guess the approximate age of a building?

5. What are the factors that affect the Durability and Watertightness of concrete? How can we develop the performance of concrete by using different kinds of chemical admixtures with concrete?

6. What do you mean by the terms spalling of concrete and Delamination of an RCC element ? How can we repair an RCC beam affected by Delamination from the ceiling side ?

7. Write a short notes on the following
   a) Foundation sinking
   b) Effect of ageing in bricks
   c) Measures taken to minimise carbonation of concrete.
   d) Prophylactic corrosion protection of rebars

8. Explain
   a) The purpose of maintaining building maintenance registers & inventories
   b) One balcony of RCC was Sagging. draw and explain how to restore the RCC balcony to the original term.

ARC3205

DESIGN OF STRUCTURES-III

MODEL QUESTION PAPER

Second Semester

(Effective from the admitted batch of 2015-2016)

(IS 456 2000,IS 1343 1980 are allowed for Examinations)

Time: 3 Hrs. Max **Marks: 70M**

Answer any FIVE questions
All Questions Carry Equal Marks

1. A roof slab is supported on columns spaced 5 m apart in both the directions. The size of the square columns is 440 mm and the live load on the roof is 1.5 kN/m^2. The load of the waterproof treatment course on slab is 2.0 kN/m^2. Design the flat slab with column heads. Height of the column above the mat foundation is 6 m.

2. Two columns carrying 400 kN and 600 kN are spaced 4 mand 6 m apart and they have to be provided with a foundation on a soil having a net bearing capacity of 60 kN/m^2. The footing must be restricted to 2.5 m width. The columns size is 500 by 500 mm.

3. Design the beams and columns of a portal frame hinged at base to suit the following data: Spacing of portal frames = 4 m, Height of columns = 4 m, Distance between column centres = 10 m, Live load on roof = 1.5 kN/mm^2, RCC slab continuous over portal frames and Safe bearing capacity of soil at site is 200 kN/mm^2. Also sketch the details of the reinforcement of beam and column.

4. Design the stem of a reinforced concrete cantilever type retaining wall to retain earth with the top of the wall to a height of 5m. The density if soil is 14 KN/m^3 and the angle of repose is 30 degrees. Adopt M20 grade concrete and Fe-415 HYSD bars. Sketch the details of reinforcements of the retaining wall. Assume the safe bearing capacity of soil as 180 KN/m^2.

5. Explain in detail the various post-tensioning devices with neat sketches.

6. A rectangular concrete beam 100mm wide and 250mm deep, spanning over 8m is prestressed by a straight cable carrying an effective prestressing force of 250kN at an eccentricity of 40mm. The beam supports a live load of 1.2kN/m. (a) Calculate the resultant stress distribution for the central cross section of the beam. The density of concrete is 24kN/m^2. (b) Find the magnitude of prestressing force with an eccentricity of 40mm which can balance the stresses due to load and live loads at bottom fiber of central section of the beam.

7. A pretentioned beam 250 mm wide and 300 mm deep is prestressed by 12 wires each of 7 mm diameter initially stressed to 1200 N/mm^2 with their centroids located 100 mm from the soffit of the beam. Estimate the final loss of stress due to elastic deformation, creep, shrinkage and relaxation using IS: 1343 1980 code and the following data: Relaxation of stress in steel = 90 N/mm^2, E_s= 210 N/mm^2, E_c= 35 N/mm^2, Creep coefficient = 1.6 and Residual shrinkage strain = 3 X 10^{-4}.
8. Write short notes on:
    a) Difference between column head and column drop with neat sketches.
    b) Types of retaining walls with neat sketches.
    c) Advantages of prestressed concrete over reinforced concrete.

ARC3206
COMPUTER APPLICATIONS-II

III /V B.Arch. DEGREE EXAMINATION
Second semester
B.ARCHITECTURE

MODEL QUESTION PAPER
(VIVA-VOCE)
(W.E.F. 2020-21 Admitted Batch)

Time: VV Hrs. Marks: 50M

VIVA-VOCE

ARC4101
ARCHITECTURE DESIGN-VI

IV /V B.Arch. DEGREE EXAMINATION
First semester
B.ARCHITECTURE

MODEL QUESTION PAPER
(W.E.F. 2020-21 Admitted Batch)

Time: Marks: 50M

VIVA-VOCE

ARC4102
WORKING DRAWINGS-II

IV/V B.Arch. DEGREE EXAMINATION
First semester
B.ARCHITECTURE

MODEL QUESTION PAPER
(W.E.F. 2020-21 Admitted Batch)

Time: Marks: 50M

VIVA-VOCE

ARC4103

URBAN DESIGN

IV /V B.Arch. DEGREE EXAMINATION
First semester
B.ARCHITECTURE

MODEL QUESTION PAPER
(W.E.F. 2020-21 Admitted Batch)

Time: 3 Hrs. Max Marks: 70M

Answer any **FIVE** questions
All Questions Carry Equal Marks

1. Distinguish the role of Planning, urban design and Architecture, through relevant examples.
2. What are the components of Urban space? Discuss with examples their interdependencies.
3. Discuss place making with respect to renaissance and medieval periods with neat sketches.
4. Discuss the city of Chandigarh in the context of planning and Urban design.
5. Write short notes on: 1. Kevin lynch 2. Jane Jacobs
6. What are the various components of green infrastructure? Discuss with examples.
7. Write short notes on any two of the following: 1. TOD 2. Urban Renewal3. compact city
8. What are the essential aspects of smart cities? Elaborate with examples the different projects done under smart city programmes.

ARC4104

BUILDING SERVICES-IV (ADVANCED SERVICES)

MODEL QUESTION PAPER

(W.E.F. 2020-21 Admitted Batch)

IV /V B.Arch. DEGREE EXAMINATION

First semester

B.ARCHITECTURE

Time: 3 Hrs. Max Marks: 70M

Answer any **FIVE** questions

All question carry **EQUAL** marks

1. List the different types of fire sprinklers and compare their advantages and disadvantages.

2. Explain the main acts and regulation which affect the design of industrial premises as regards to fire protection.

3. Explain the following
   a. Handling capacity of lifts and escalators 5M
   b. Types of elevators 4M
   c. Safety features for Lifts and Escalators are per NBC 5M

4. Explain the recent developments in vertical transportation systems.Make a Comparative study between Lifts and Escalators.

5. Explain the terminology used in fire and life safety in the buildings

   a) Emergency Lighting System 3M
   b) Firefighting Shaft (Fire Tower) 3M
   c) Refuge Area 2M
   d) Fire Resistance 3M
   e) Venting Fire 3M

6. State the concept of building automation. List any four applications where building management systems are used.

7. Elaborate how sustainable development can be aided by Smart and intelligent buildings.

8. Outline the most recent architectural approaches toward ecological and environmentally friendly building design.

ARC4105
STRUCTURES DESIGN PROJECT

IV /V B.Arch. DEGREE EXAMINATION
First semester
B.ARCHITECTURE

MODEL QUESTION PAPER
(VIVA-VOCE)
(W.E.F. 2020-21 Admitted Batch)

Time: VV Hrs. Marks: 50M

VIVA-VOCE

ARC4106

PROFESSIONAL ELECTIVE-I –A

IV /V B.Arch. DEGREE EXAMINATION
First semester
B.ARCHITECTURE

ARCHITECTURAL CONSERVATION

MODEL QUESTION PAPER
(W.E.F. 2020-21 Admitted Batch)

Time: 3 Hrs. Max Marks: 70M

Answer any **FIVE** questions
All Questions Carry Equal Marks

1) a) Explain the need and purpose of heritage conservation in present scenario.
   b) Write any two International Charters and their role in heritage conservation?

2) Define the following with examples.
   a) Conservation
   b) Preservation
   c) Adaptive reuse

3) Briefly explain about the role of Archaeological Survey of India and INTACH organizations in heritage conservation in India.

4) Elaborate the importance of INTACH charter for grading and enlisting of heritage sites in details.

5) Discuss on ‘Degrees of Invention’ in conservation of heritages in practice.

6) Illustrate the character and issues of any heritage precincts with example.

7) Explain the process of documentation of historic structures in detail with the help of INTACH FORMAT.

8) Explore various Planning Tools and Para-legal measures in Urban Conservation.

ARC4106

PROFESSIONAL ELECTIVE-I –B

IV /V B.Arch. DEGREE EXAMINATION
First semester
B.ARCHITECTURE

BARRIER FREE ARCHITECTURE

MODEL QUESTION PAPER
(W.E.F. 2020-21 Admitted Batch)

Time: 3 Hrs. Max Marks: 70M

Answer any **FIVE** questions
All Questions Carry Equal Marks

1. Discuss the importance of barrier free design in built environment to empower physically challenged people.

2. What is universal design and how does it affect accessibility?

3. Answer the following
   a) Describe the tactile guiding path
   b) Illustrate the ramp design specifications

4. List the types of disabilities and discuss the dimension of barrier for any one of them.

5. What is universal design in architecture and its design principles?

6. Give the specifications of the following for a barrier free design
   a) Entrance and exit
   b) Lifts
   c) Corridors

7. Discuss the aspects of barrier free design for an Auditorium.

8. Discuss the present-day technological aid in universal design.

ARC4106

PROFESSIONAL ELECTIVE-I –B

IV /V B.Arch. DEGREE EXAMINATION
First semester
B.ARCHITECTURE

BARRIER FREE ARCHITECTURE

MODEL QUESTION PAPER
(W.E.F. 2020-21 Admitted Batch)

Time: 3 Hrs. Max Marks: 70M

Answer any **FIVE** questions
All Questions Carry Equal Marks

1. Discuss the importance of barrier free design in built environment to empower physically challenged people.

2. What is universal design and how does it affect accessibility?

3. Answer the following
   a) Describe the tactile guiding path
   b) Illustrate the ramp design specifications

4. List the types of disabilities and discuss the dimension of barrier for any one of them.

5. What is universal design in architecture and its design principles?

6. Give the specifications of the following for a barrier free design
   a) Entrance and exit
   b) Lifts
   c) Corridors

7. Discuss the aspects of barrier free design for an Auditorium.

8. Discuss the present-day technological aid in universal design.

ARC4107
SOFT SKILLS

IV /V B.Arch. DEGREE EXAMINATION
First semester
B.ARCHITECTURE

MODEL QUESTION PAPER
(VIVA-VOCE)
(W.E.F. 2020-21 Admitted Batch)

Time: VV Hrs. Marks: 50M

VIVA-VOCE