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15HUM56

Fifth Semester B.Arch. Degree Examination, June/July 2023 Sociology and Building Economics

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. Briefly enumerate the elements of a society. (10 Marks)
b. Establish the necessity of study of sociology and its impact on built environment. (10 Marks)

OR

- 2 a. Explain the character and functions of a family. (08 Marks)
b. Differentiate between Bio-social and socio culture elements of a society. (12 Marks)

Module-2

- 3 a. Define Urbanization and the urbanization process. (05 Marks)
b. Elaborate on the impact of urbanization and the resulting social problems. (15 Marks)

OR

- 4 a. Discuss migration, its causes and impact on urbanization. (10 Marks)
b. Write short notes on :
i) Purpose of social research.
ii) Secondary source of data. (10 Marks)

Module-3

- 5 Briefly Explain
a. Utilities
b. Value
c. Price
d. Wealth (20 Marks)

OR

- 6 Discuss in detail the economic organization of a society. (20 Marks)

Module-4

- 7 Explain in brief.
a. Consumption
b. Wants
c. Needs
d. Opportunity cost (20 Marks)

OR

- 8 Explain briefly
a. Laws of supply and Demand (15 Marks)
b. Laws of Diminishing return (05 Marks)

Module-5

- 9 a. Explain the Bid Rent theory which define the relation between location and land value. (12 Marks)
- b. Write short notes on.
i) Life cycle cost
ii) Cost and Cost Indices (08 Marks)
- OR
- 10 Explain the theoretical city models based on land use and land value. (20 Marks)

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15ARC52

Fifth Semester B.Arch. Degree Examination, Dec.2023/Jan.2024 Materials and Methods in Building Construction – V

Time: 4 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 An 'L' angle truss roof system is required for a building of size 12m × 20m. Draw the following construction details for suitable scale:
- Key plan. (05 Marks)
 - Sectional elevation of 'L' angle truss. (10 Marks)
 - Any 2 detail. (05 Marks)

OR

- 2
- Define truss. List the various types of steel trusses with sketches. (10 Marks)
 - List the various types of roofing materials that can be used for roof trusses. (10 Marks)

Module-2

- 3 A pre engineered building is required for an industrial building of 15m × 30m and has a clear height of 6m. Provide the following details:
- Roof plan – 1:100 (08 Marks)
 - Section showing portal frame – 1:100 (08 Marks)
 - Any 2 details – 1:10 (04 Marks)

OR

- 4 Write short notes with explanatory sketches for.
- Edge and valley beams and stiffening beams and archribs in vaulted roof. (10 Marks)
 - Shell roofs. (10 Marks)

Module-3

- 5 Provide construction details for an RCC folded plate roof for a building of size 25m×30m×6m height.
- Roof plan – 1:100 (08 Marks)
 - Section – 1:100 (08 Marks)
 - Gutter Detail – 1:10 (04 Marks)

OR

- 6 Write short notes with explanatory sketches and details of construction for :
- Geodesic Domes (10 Marks)
 - Hyperbolic paraboloid shell Roofs (10 Marks)

Module-4

- 7 An exhibition Installation of 20m×20m needs a space frame structure to be designed. Provide the following drawings :
- Roof plan – 1:100 (08 Marks)
 - Partial section (showing connectors) – 1:50 (08 Marks)
 - Connector Detail – 1:5 (04 Marks)

OR

- 8 a. What are the different types of Tensile Roofs? Explain the construction details with sketches. (10 Marks)
- b. Explain pneumatic structure and its principles with the help of sketches. (10 Marks)

Module-5

- 9 a. Explain the types and uses of plastic. (10 Marks)
- b. What are sealants? Explain various types of sealants. (10 Marks)

OR

- 10 a. How is water proofing done in the following cases:
i) Toilets ii) Basement (10 Marks)
- b. Explain various construction chemicals used in buildings. (10 Marks)

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18ARC54

Fifth Semester B.Arch. Degree Examination, Dec.2023/Jan.2024 History of Architecture – V

Time: 3 hrs.

Max. Marks: 100

- Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.
2. Supplement the answers with neat, proportionate and relevant sketches.
3. Sketches and explanatory notes carry equal weightages of marks.*

Module-1

- 1 a. Enumerate the various types of buildings and their importance, Indo-Islamic style in India. (10 Marks)
b. Illustrate and explain the general architectural characteristic features of public mosque in India. (10 Marks)

OR

- 2 a. Illustrate and explain the general architectural characteristic features of Khalji style with any one example. (10 Marks)
b. Illustrate and explain the planning principles, layout design and arrangement of spaces and buildings in Firoz Shah Kotla, Old Delhi. (10 Marks)

Module-2

- 3 a. With suitable sketches, explain the typical architectural characteristic features of Bengal mosques of later phase. (10 Marks)
b. With relevant sketches, explain the architectural design features of Dakhil darwaza at Gaur. (10 Marks)

OR

- 4 a. With the sketches of plan and section, explain the typical architectural design features of Wavs of Gujarat. (10 Marks)
b. With the vertical section of the main tomb building of Ibrahim Rauza, Bijapur, explain its architectural characteristic design features. (10 Marks)

Module-3

- 5 a. With suitable sketches, explain the structural systems and roofing methods employed in the Jami Masjid at Gulbarga. (12 Marks)
b. With ground plan, explain the architectural and decorative features of Madrassa of Mohammed Gawan, Bidar. (08 Marks)

OR

- 6 a. With suitable sketches, explain the architectural design features of Diwan-i-khas, Fatehpur Sikri. (10 Marks)
b. With relevant sketches, explain the architectural design features of Birbal's house at Fatehpur Sikri. (10 Marks)

Module-4

- 7 a. With site plans of Akbar's tomb and Tajmahal, compare the layout designs and arrangement of gardens and buildings. (12 Marks)
- b. With suitable sketches, explain the architectural design features of Diwan-i-am and Diwan-i-khas, Red fort, Delhi. (08 Marks)

OR

- 8 a. With site plan, explain the planning and design principles of Fort St George, Madras. (08 Marks)
- b. Illustrate and explain the building types and general architectural character of early Colonial architecture in India. (12 Marks)

Module-5

- 9 a. With suitable sketches, explain the architectural design and the composition of various elements on the façade of Victoria Terminus, Bombay. (10 Marks)
- b. Illustrate and explain the Lutyen's design approach and various elements of composition employed in the design of Rashtrapathi Bhavan, New Delhi. (10 Marks)

OR

- 10 a. With suitable sketches, explain the architectural design features of cathedral of Bom Jesus, Goa. (10 Marks)
- b. With suitable sketches, explain the architectural characteristic features of Domestic French buildings of Pondicherry. (10 Marks)

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15ARC53

Fifth Semester B.Arch. Degree Examination, Dec.2023/Jan.2024

Building Services – II

Time: 3 hrs.

Max. Marks: 100

Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.
2. Support your answer with neat sketches.

Module-1

- 1 a. Define electricity? Discuss various considerations involved in planning of electrical services in a building. (10 Marks)
b. What is meant by sub-station? Discuss the functions and classifications of sub-stations. (10 Marks)

OR

- 2 a. Explain the distribution of electricity from generating station to consumer unit with a neat diagram. (10 Marks)
b. What is a transformer? Explain its principle of operation and classifications based on type of cooling with sketches. (10 Marks)

Module-2

- 3 Explain the generation of electricity using solar, hydel or thermal energy. Listing its merits and demerits. (20 Marks)

OR

- 4 a. Discuss various measures to conserve electricity. (10 Marks)
b. Explain the concept of "Net zero Building Design". (10 Marks)

Module-3

- 5 a. Explain the need of protective devices in building electrical system and their selection criteria. (10 Marks)
b. Write short notes, with the help of sketch on :
i) MCB
ii) Fuses and its types. (10 Marks)

OR

- 6 a. What is Earthing? Explain its importance in buildings. (04 Marks)
b. Explain the plate Earthing method with the help of a neat sketch. (16 Marks)

Module-4

- 7 a. Discuss the various types of lamps available and their apt applications. (10 Marks)
b. What are the possibilities of designing lighting methods for different activities or needs? (10 Marks)

OR

- 8 Write notes with illustrations on:
a. Landscape lighting. (10 Marks)
b. Systems of Luminaries. (10 Marks)

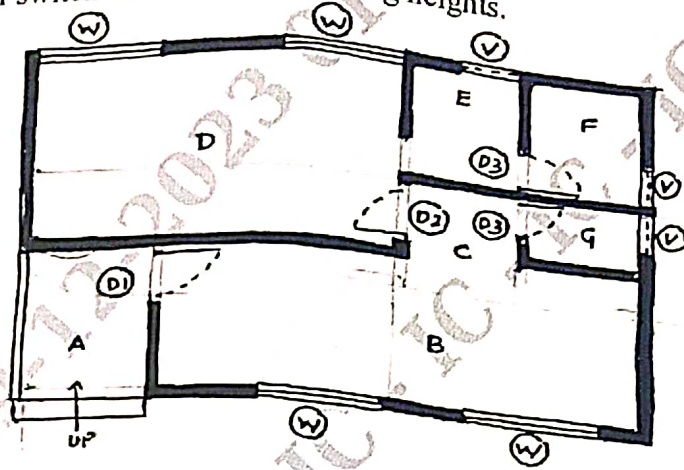
Module-5

15ARC53

- 9 a. Draw an electrical layout for a Doctor's Clinic using standard notations. [Use the figure and spatial requirements for reference. Assume missing data].
 b. Make a schedule of switch boards with mounting heights.

(15 Marks)

(05 Marks)



- | | |
|---------------------------------|---------------|
| A- Porch | (2.0 × 3.0m) |
| B- Waiting and Reception | (6.0 × 3.0m) |
| C- Ante Room | (1.2 × 1.2m) |
| D- Consultation and Examination | (5.0 × 4.0m) |
| E- Store | (1.2 × 1.8m) |
| F- Toilet 01 | (1.2 × 1.8m) |
| G- Toilet 02 | (1.2 × 1.30m) |

OR

- 10 Give a detailed note on extra low voltage system and explain their relevance and importance.
 (20 Marks)

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Sixth Semester B.Arch. Degree Examination, June/July 2023

Building Services – III

Max. Marks: 100

Time: 3 hrs.

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 Under what circumstances would mechanical ventilation system be proposed in a building by an architect? Describe an apt mechanical ventilation system for a factory and a residence respectively. (20 Marks)

OR

- 2 Explain refrigeration cycle with help of schematic diagram. (20 Marks)

Module-2

- 3 What are the classification of air conditioning systems? Explain any 2 in detail. (20 Marks)

OR

- 4 Define:
i) Clean rooms
ii) Different types of duct systems. (20 Marks)

Module-3

- 5 Answer the following :
i) Explain the different types of elevators based on hoist mechanism.
ii) Explain average waiting time and peak handling capacity. (20 Marks)

OR

- 6 With the help of sketches explain in detail the different components of an elevator. (20 Marks)

Module-4

- 7 Write brief notes on :
i) Common causes of fire and classification of hazards.
ii) Classification of buildings as per NBC. (20 Marks)

OR

- 8 Explain the concept of passive fire protection in buildings. (20 Marks)

Module-5

- 9 Explain in detail with sketches different types of fire sprinkler systems. (20 Marks)

OR

- 10 Explain in detail different types of fire Alarm system. Explain the components and importance of fire alarm system. (20 Marks)

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Sixth Semester B. Arch. Degree Examination, Jan./Feb. 2023 Landscape Architecture

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. Define term Landscape. Explain the need to study landscape, briefly. (10 Marks)
b. What is landscape Architecture and explain its scope in the practice. (10 Marks)

OR

- 2 Write the difference between the following terms. (20 Marks)
a) Natural and Manmade Landscape
b) Hardscape and Softscape
c) Urban and Rural Landscape
d) Modern and Contemporary Landscape style

Module-2

- 3 Explain the process or system involved in designing a landscape project, with emphasis on site analysis and site inventory. (20 Marks)

OR

- 4 a. What is Grading. Mention different types of grading involved in land modification. (10 Marks)
b. Explain the purpose and usage of land modification in landscape design. (10 Marks)

Module-3

- 5 Explain Vegetation as an Element of Primary design can be utilized by Landscape architect to Achieve various functions in design like, Aesthetics, Climatic, Architectural and Engineering purposes. (20 Marks)

OR

- 6 Explain briefly the following terminologies with relevant sketches.
i) Street furniture ii) Paving iii) Green walls iv) Pergolas and Trellis. (20 Marks)

Module-4

- 7 Elaborate on the Historical Asian garden styles with respect to its philosophy, garden types, elements and materials with relevant sketches.
i) Japanese gardens ii) Mughal gardens

(20 Marks)

OR

- 8 Explain the Water/Riverfront project of any of your favorite contemporary Landscape architect with respect their design philosophy, ecological sensitivity and sustainable approach adopted in the chosen examples. (20 Marks)

Module-5

- 9 Design a small courtyard for a "CRECHE" of size 8m x 5m open to sky surrounded by a ground floor building on all sides, having 2.4m wide covered corridor around the courtyard. Provide necessary rendered plan, elevations/sections, or sketches to explain your concept and briefly mention the design considerations adopted. (20 Marks)

OR

- 10 Explain the design consideration involved while designing a streetscape with relevant sketches. (20 Marks)

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Sixth Semester B.Arch. Degree Examination, June/July 2023 Materials and Methods in Building Construction – VI

Time: 4 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing one full question from each module.

- Module-1**
- 1 a. Explain how glass plays an important role in the construction industry. (10 Marks)
 - b. Explain any 5 types of glass commonly used in building construction. (10 Marks)
- OR**
- 2 A shopfront in a mall has to be designed with a frameless glass door for an opening of 3000 × 3600mm. Assuming suitable scales, draw plan, elevation, cross sections and 2 minimum associated details for the same. (20 Marks)
- Module-2**
- 3 With neat sketches, explain the various support systems the point fixed support glazing uses. (20 Marks)
- OR**
- 4 a. With neat illustrations, explain any 4 types of structural glazing systems. (10 Marks)
 - b. Why is aluminum preferred as a building material? Illustrate with details the common types of sun lowers seen in buildings. (10 Marks)
- Module-3**
- 5 An artist's studio requires an opening of 3000 × 2700mm to be designed with a wooden sliding folding door design. With suitable scale, draw plan, elevation, cross-sections and any 2 details. (20 Marks)
- OR**
- 6 An architect's office requires an opening of 3000 × 2700mm to be designed with a UPVC door design. Assuming suitable scales, draw plan, elevation, cross-sections and any 2 details for the same. (20 Marks)
- Module-4**
- 7 Design and detail an opening of 3600mm × 2700mm for a conference room in an office using aluminium sliding folding doors. Draw the construction mechanism for the same with a layout plan, elevation, cross sections and details related to the same. (20 Marks)
- OR**
- 8 Explain the working mechanism with neat sketches of a steel sliding folding door. (20 Marks)
- Module-5**
- 9 A music studio with a recording room of size 4000 × 4500mm requires to be sound proofed using appropriate sandwich panels, provide construction details with suitable sketches for the same. (20 Marks)
- OR**
- 10 Design and detail a skylight in a terrace for an opening of size 1200 × 1500mm. Draw with suitable scale the plan, elevation, cross-sections and details for the same. (20 Marks)

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15ARC64

Sixth Semester B.Arch. Degree Examination, June/July 2023

Contemporary Architecture

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

2. Any revealing of identification, appeal to evaluator and/or equations written eg, 42+8 = 50, will be treated as malpractice.

- 1 Elaborate on the architecture features of the princely states and ONE states feature as prominent example. (20 Marks)
- Module-1
- 2 Le Corbusier is regarded the pioneer of "Modern Architecture" in India. Justify how and also elaborate his work in India post independence era. (20 Marks)
- OR
- 3 Describe the design approach of architect Achyut P. Kanvinde or architect Raj Rewal with help of any one of their architectural projects. (20 Marks)
- Module-2
- 4 a. Discuss contributions of architect Lauri Baker to Contemporary Indian Architecture. (10 Marks)
- b. Identify the parallel trends of contemporary Indian architecture and discuss any one with an example. (10 Marks)
- OR
- 5 a. Explain the design of Smith House, Connecticut by Richard Meier. (08 Marks)
- b. Charles Moore is regarded as a staunch follower of post-modern classicism. Write a brief note on his principles of design. Explain in detail the Piazza d'Italia, New Orleans. (12 Marks)
- Module-3
- 6 Why is Norman Foster Labelled as a 'High Tech' architect? Explain with one example of his work. (20 Marks)
- OR
- 7 Explain in detail the post modernist ideas and concepts. Discuss contributions of Robert Venturi with relevant examples. (20 Marks)
- Module-4
- 8 Spanies architect Calatrava and Renzo Piano, used the structural systems in the design to create "new form of expressionism", discuss the same with relevant examples; from their work. (20 Marks)
- OR
- 9 Explain the design ideologies citing one work of the architect Daniel Libeskind or Rem Koolhaas. (20 Marks)
- Module-5
- 10 Explain the ideas of Deconstructivism with help of examples of works of architect Zaha Hadid or Peter Eisenman. (20 Marks)
- OR