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***B.Arch. Degree VII Semester Supplementary Examination
November 2025***

**AR 1702 URBAN DESIGN
(2014 Scheme)**

(Use illustration wherever required. Illustrations carry due mark)

Time: 3 Hours

Maximum Marks: 100

**PART A
(Answer ALL questions)**

(8 × 5 = 40)

- I. Write Short notes on the following:
- Nodes and landmarks.
 - Road Pattern and Hierarchy.
 - Urban Enclosure.
 - Serial Vision.
 - Urban form.
 - Urban conservation.
 - Chandigarh City.
 - Christopher Alexander's theory of urban design.

PART B

(4 × 15 = 60)

- II. What are the scope and objectives of Urban design? Explain the needs of Urban design in contemporary India.
- OR**
- III. Compare and distinguish Architecture, Urban Design and Planning. Discuss the level of interaction of these three fields in shaping urban areas.
- IV. Describe briefly on the principles of urban spatial organization.
- OR**
- V. Explain the elements of Imageability by Kevin Lynch with live city examples.
- VI. Explain the surveying methods and techniques used to conduct an urban design survey.
- OR**
- VII. Explain briefly figure ground theory, linkage theory and place theory.
- VIII. Explain in detail the Urban Renewal, its scope, need and procedure and effects. Discuss with examples.
- OR**
- IX. Briefly explain with examples how waterfront development is integrated in a waterfront development project.

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***B.Arch. Degree VII Semester Supplementary Examination
November 2025***

**AR 1703 HOUSING
(2014 Scheme)**

Time: 3 Hours

Maximum Marks: 100

**PART A
(Answer ALL questions)**

(8 × 5 = 40)

- I. Write short notes of the following:
- Importance of Housing.
 - Short note on HUDCO.
 - National Housing Bank.
 - Role of Housing Finance Institution.
 - Slum Improvement.
 - Valmiki Ambedkar Awas Yojana (VAMBAY).
 - Role of housing in Employment generation.
 - Five Year Plans.

PART B

(4 × 15 = 60)

- II. Elaborate the Major Housing programmes carried out in the various five year plans.
- OR**
- III. Discuss the various issues of housing in urban India.
- IV. Briefly describe any Slum Improvement programme implemented in Indian Cities. What are the major areas of action? (Quote with example)
- OR**
- V. Rural housing is dominated by Kutcha Houses and poor infrastructure conditions. Explain the major issues in Rural Housing in India.
- VI. What is the need of National Housing policy? Explain its role in housing in the present day context.
- OR**
- VII. Elaborate the concept of Aided Self Help. How it is been benefited for the poor? Explain through studies of relevant and innovative housing schemes or project.
- VIII. What is the importance of housing finance? What are the challenges in accessing Housing Finance for Low income groups?
- OR**
- IX. Elaborate the role of major housing finance agencies at National and State levels (NHB, HDFC, LICHL, GIC, Commercial Banks etc).

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***B.Arch. Degree VII Semester Supplementary Examination
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AR 1704 INTERIOR DESIGN

(2014 Scheme)

(Use illustrations wherever required. Illustrations carry due Marks)

Time: 4 Hours

Maximum Marks: 100

PART A

(Answer *ALL* questions)

(8 × 5 = 40)

- I. Write short notes on the following:
- (a) Significance of spatial organization in creating functional interior environments.
 - (b) Ratio and Proportion.
 - (c) Psychological effects of colour in interior spaces.
 - (d) Importance of Human perception and viewpoints in Interior design.
 - (e) Relationship between furniture design and User comfort.
 - (f) Design considerations for Reception and waiting areas in commercial interiors.
 - (g) Contribution of indoor plants to the visual and environmental quality of interiors.
 - (h) Emerging trends in materials and finishes for contemporary interior spaces.

PART B

(1 × 60 = 60)

- II. Design the interior of a co-working studio space of approximately 80 sq.m intended for young creative professionals. The space should include a reception/waiting area, shared workstations, a discussion zone and a small pantry. Assume all necessary data.

Requirements:

- (a) Detailed floor plan – *Scale 1:20* (30)
- (b) Sections (ceiling design, lighting and furniture details – *Scale 1:20*) (20)
- (c) Perspective view illustrating the overall ambience and material palette. (10)

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***B.Arch. Degree VII Semester Supplementary Examination
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**AR 1705 DESIGN ASPECTS OF EARTHQUAKE RESISTANT STRUCTURES
(2014 Scheme)**

Time: 3 Hours

Maximum Marks: 100

PART A
(Answer *ALL* questions)

(8 × 5 = 40)

- I. (a) Define damping and ductility.
- (b) Explain re-entrant corners and how it impacts seismic resistance of a structure.
- (c) Difference between zone factor and importance factor.
- (d) Define drift story as well as the factors affecting it.
- (e) What are the factors affecting ductility?
- (f) Write the ductile detailing considerations for a shear wall.
- (g) Enumerate the objectives of base isolation.
- (h) Which locations do you prefer to install base isolators?

PART B

(4 × 15 = 60)

- II. Write the effects of the following on seismic performance of a structure
 - (i) Damping
 - (ii) Redundancy
 - (iii) Ductility.
- III. How quality of construction and materials improves seismoresistant capacity of a building?
- IV. Elaborate on the procedure and limitations of linear static analysis.
- OR
- V. Explain in detail about time history analysis and mention its advantages over other methods.
- VI. What are the requirements, impact and assessment for ductility?
- OR
- VII. Write the ductile detailing considerations of columns.
- VIII. What is the purpose of base isolation? Also elaborate on the considerations and basic elements of seismic isolation.
- OR
- IX. Describe the different types of base isolation systems.

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***B.Arch. Degree VII Semester Supplementary Examination
November 2025***

AR 1706 (a) SUSTAINABLE ARCHITECTURE (ELECTIVE 1)

(2014 Scheme)

Time: 3 Hours

Maximum Marks: 100

PART A
(Answer *ALL* questions)

(8 × 5 = 40)

- I. Write short notes on the following:
- Intergenerational equity in sustainability
 - Passive design strategies in sustainable architecture
 - Net-zero and regenerative design
 - Adaptive reuse of existing structures
 - Life-Cycle Assessment (LCA)
 - GRIHA (Green Rating for Integrated Habitat Assessment – India)
 - Economic sustainability in the built environment
 - Characteristics of a sustainable community

PART B

(4 × 15 = 60)

- II. Define carrying capacity in the context of environmental and architectural planning. How does the concept of carrying capacity relate to sustainable development and urban growth?
- OR**
- III. How does architecture contribute to climate change? Explain how climate-responsive design can mitigate the effects of global warming.
- IV. “Eco-architecture is not a style but a system of thinking”. Discuss. Compare eco-architecture, bioclimatic architecture and sustainable architecture.
- OR**
- V. Define embodied energy in the context of building construction. How does embodied energy differ from operational energy in buildings?
- VI. Define the term “Green Building”. How is it different from conventional buildings? Explain how green buildings help mitigate climate change and resource depletion.
- OR**
- VII. What is a green building rating system and why is it necessary? Explain the LEED certification. Mention an example of a LEED-certified building in India and describe its features.
- VIII. Define Urban Ecology and explain its scope in architecture and urban planning. What are the key components of an urban ecosystem.
- OR**
- IX. What is Urban Heat Island effect, and what causes it? Describe the relationship between urban heat islands and architectural design.

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**B.Arch. Degree VII Semester Supplementary Examination
November 2025**

**AR 1706 (b) COST EFFECTIVE TECHNOLOGY (ELECTIVE I)
(2014 Scheme)**

Time: 3 Hours

Maximum Marks: 100

**PART A
(Answer ALL questions)**

(8 × 5 = 40)

- I. (a) Define Cost effective techniques.
- (b) List major elements of planning aspects in reducing cost of construction.
- (c) Briefly explain Indigenous materials used in cost effective construction.
- (d) What are alternate building materials used in cost effective technology?
- (e) What is the primary goal of innovative technology?
- (f) List few examples of construction technologies widely used in housing.
- (g) Briefly explain the maintenance aspect in cost effective technology.
- (h) Explain with an example any one cost effective application in a residential building.

PART B

(4 × 15 = 60)

- II. Elaborate the need for implementing cost effective techniques in construction in our country.
- OR**
- III. Analyse the major aspects for reducing building costs.
 - IV. Explain the significance of choice of materials in a state like Kerala to reduce building cost.
- OR**
- V. Explain in detail advantages of alternate building materials with examples.
 - VI. Explain relevance of traditional technology with atleast two examples.
- OR**
- VII. Elaborate on the survey of various research institutes in our country in the field of innovative technology.
 - VIII. Explain how building costs can be reduced and be justified in terms of maintenance of buildings.
- OR**
- IX. Elaborate how local adaptation of innovative technology has been a very effective cost effective technique with an example of a residential building.

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***B.Arch. Degree VII Semester Supplementary Examination
November 2025***

**AR 1707 (a) RESEARCH METHODOLOGY AND STATISTICS (ELECTIVE II)
(2014 Scheme)**

Maximum Marks: 100

Time: 3 Hours

**PART A
(Answer ALL questions)**

(8 × 5 = 40)

- I. (a) Define literature review and explain its purpose.
- (b) Briefly discuss different research paradigms and how they influence the selection of research methodology.
- (c) Differentiate between descriptive and inferential statistics with suitable examples.
- (d) Briefly explain the concept of central tendency and its relevance in architectural research.
- (e) Describe the key components of a scientific research report.
- (f) What are the important considerations while writing and publishing a scholarly paper?
- (g) What are the key differences between behavioural and physical research in the context of architectural research?
- (h) What is a field survey, and why is it important in architectural research?

PART B

(4 × 15 = 60)

- II. What is a research process? Explain how the formulation of research aims and objectives contributes to the success of an architectural research.

OR

- III. Explain the steps involved in conducting a comprehensive literature review. How can this process guide the development of a strong architectural research proposal?

- IV. Using examples relevant to architectural research, explain the concepts of probability, hypothesis testing, and inferential statistics. How do they support decision-making in research?

OR

- V. Explain the difference between parametric and non-parametric statistical methods. In what types of architectural studies would each be more appropriate and why?

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VI. Evaluate the importance of clarity, structure and academic integrity in scientific writing. How can poor writing affect the credibility of architectural research?

OR

VII. Write a detailed outline for a research report on a current architectural issue (e.g., climate-responsive design, urban housing crisis). Explain what each section should include.

VIII. Explain the different types of questionnaires used in research, highlighting their advantages and limitations. Also, describe the structure of a well-designed questionnaire.

OR

IX. Explain the importance of any four measurement tools for behavioural research. Support with examples from architectural contexts.
