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**B.Arch. Degree VII Semester Regular/Supplementary Examination
November 2023**

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

Time: 3 Hours

Maximum Marks: 100

**PART A
(Answer ALL questions)**

(8 × 5 = 40)

- I. Write short notes on the following:
- Elements of urban design.
 - Urban design.
 - Urban enclosure.
 - Kevin Lynch.
 - Pattern language.
 - Serial vision.
 - Pedestrian malls.
 - Road form and hierarchy.

PART B

(4 × 15 = 60)

- II. Define urban design and explain the relevance of urban design in this fast urbanizing world.
- OR**
- III. Describe the scope and objectives of Urban design.
- IV. Discuss the concepts of the book "The Image of the city" by Kevin Lynch.
- OR**
- V. Describe the spatial design theories by Roger Trancik.
- VI. Explain Figure ground theory, Linkage theory and Place theory.
- OR**
- VII. Write briefly on Christopher Alexander and his philosophy through his books.
- VIII. What is Urban renewal? Discuss its scope and need in detail with examples.
- OR**
- IX. Explain waterfront development taking a case from India.

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**B.Arch. Degree VII Semester Regular/Supplementary Examination
November 2023**

**AR 1703 HOUSING
(2014 Scheme)**

Time: 3 Hours

Maximum Marks: 100

**PART A
(Answer ALL questions)**

(8 × 5 = 40)

- I. Write short notes on the following:
- Housing stock.
 - List five major housing programmes since independence in India.
 - Habitable room.
 - Five parameters of Urban housing.
 - Housing finance sources.
 - Self help Group.
 - Affordable housing.
 - HDFC.

PART B

(4 × 15 = 60)

- II. Elaborate on housing shortage in India.
OR
- III. Urbansation has caused poverty issues in India. Establish narrating the character and causes of poverty.
- IV. Explain briefly EWS, LIG, MIG AND HIG status in India.
OR
- V. Elaborate on any one slum development programme with a suitable example in India.
- VI. Explain in detail the salient features of National Housing Policy of our country.
OR
- VII. Elaborate on a successful NGO assisted housing the poor programme in India.
- VIII. Housing finance continues to be a challenging issue. Explain the reasons.
OR
- IX. Elaborate on the various housing finance mechanism existing in our country.

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***B.Arch. Degree VII Semester Regular/Supplementary Examination
November 2023***

AR 1704 INTERIOR DESIGN

(2014 Scheme)

(One drawing sheet and butter sheet must be supplied)

Time: 4 Hours

Maximum Marks: 100

PART A

(Answer *ALL* questions)

(8 × 5 = 40)

- I. Write short notes on the following:
- Principles in interior design.
 - Minimalist Interior Design.
 - Monochromatic Color Theory.
 - Furniture style in Traditional style.
 - False ceiling in Residential Projects.
 - Types of Floor Textures.
 - Sketch curtain design for bedroom.
 - Importance of plants in Interior.

PART B

(1 × 60 = 60)

- II. Design an interior of a residence living room with courtyard and furniture. Assume data whatever necessary. Specify all materials being used with dimensions.

Requirements

- Detailed plan of interior – 1:20 scale. (30)
- Section giving maximum details – 1:20 scale. (20)
- Perspective view with furniture detail. (10)

The design scheme above should include floor, ceiling and indoor landscaping.

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***B.Arch. Degree VII Semester Regular/Supplementary Examination
November 2023***

**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. Write short notes on the following:
- Mode shapes and fundamental period.
 - Dual System.
 - Modal combination techniques for estimating lateral forces.
 - Zone factor, importance factor and response reduction factor.
 - Impact of ductility.
 - Member Ductility with formulae.
 - Design principle of seismic isolation.
 - Base isolation.

PART B

(4 × 15 = 60)

- II. Describe damped and un-damped spring mass system with basic equations. (15)
- OR**
- III. (a) How building configuration affect seismo-resistance? (6)
(b) Write the advantages and disadvantages of shear wall system. (9)
- IV. Briefly explain time history analysis of seismic forces with procedure and limitations. (15)
- OR**
- V. Explain in detail about mode of superposition method including principles, advantages and disadvantages. (15)
- VI. What are the requirements for ductility? Also describe the different types of ductility. (15)
- OR**
- VII. Write the ductile detailing considerations of shear walls. (15)
- VIII. What is the feasibility of seismic isolation? Also elaborate on the considerations for seismic isolation. (15)
- OR**
- IX. Explain seismic-isolation configurations with neat sketch. (15)

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***B.Arch. Degree VII Semester Regular/Supplementary Examination
November 2023***

**AR 1706 (a) SUSTAINABLE ARCHITECTURE (ELECTIVE I)
(2014 Scheme)**

Time: 3 Hours

Maximum Marks: 100

PART A
(Answer *ALL* questions)

(8 × 5 = 40)

- I. Write short notes on the following:
- Climate action by UN.
 - Carrying capacity.
 - Informed choice of materials.
 - Role of site location Low impact construction.
 - Goals of LEED.
 - Procedure of any one Green rating system.
 - Methods used for studying urban ecology.
 - Social dimension and social ethics of sustainability.

PART B

(4 × 15 = 60)

- II. Trace the evolution of sustainability and related movements through history focusing on the efforts made by UN.
- OR**
- III. Enlist and brief about the visions of sustainability.
- IV. Explain the application of Bio-mimicry in devising sustainable solutions with suitable examples.
- OR**
- V. Write about the process of Life Cycle Assessment with major steps, its benefits and limitations.
- VI. Brief about the History, Goals, Rating Criteria, Certification Factors, Point System and basic Process of any one green rating system.
- OR**
- VII. Analyse any one Green Rated building with respect to the system followed for its rating. Discuss the innovative techniques used in detail.
- VIII. Explain the phenomenon of Urban Heat island effect with its causes, effects and mitigation strategies.
- OR**
- IX. Brief about the idea of a sustainable community and its functioning with suitable example.

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**B.Arch. Degree VII Semester Regular/Supplementary Examination
November 2023**

**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. Write short notes on the following:
- Brick Arch Foundation
 - Cost effective flooring
 - CBRI
 - 3D Printing technology
 - Bamboo Construction
 - Straw bale construction
 - Jalli Wall
 - Mud Plastering

PART B

(4 × 15 = 60)

- II. Building construction cost can be reduced through proper planning and design. Substantiate this statement.
- OR**
- III. What are the factors influencing longevity of buildings? Explain in detail with help of example.
- IV. Discuss in detail any two traditional technology used in cost effective Architecture in Kerala with help of sketches.
- OR**
- V. Discuss in detail any two Innovative technology used in cost effective Architecture in Kerala with help of sketches.
- VI. Explain the various applications of local materials in construction process. Discuss its advantages and disadvantages.
- OR**
- VII. Recycled plastics are used in new building and construction industry. Discuss its merits and demerits.
- VIII. Describe the contribution of Laurie Baker in adapting construction techniques to suit the context of Kerala with sketches.
- OR**
- IX. Analyse the local adaptation of the Innovative technologies in terms of Initial Investment, maintenance cost and longevity of buildings.

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***B.Arch. Degree VII Semester Regular/Supplementary Examination
November 2023***

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

Time: 3 Hours

Maximum Marks: 100

PART A
(Answer *ALL* questions)

(8 × 5 = 40)

- I. Write short notes on the following:
- Research Synopsis.
 - Research Paradigm of Qualitative research.
 - Role of Probability in research methodology.
 - Measures of Central tendency.
 - Importance of Referencing in Research report.
 - Differentiate between Peer-Reviewed Journal and Magazine.
 - Types of Interviews.
 - Semantic differential scale.

PART B

(4 × 15 = 60)

- II. Explain Architectural research and the process of conducting Architectural research.
- OR**
- III. Write in detail role of data base and library in research methodology.
- IV. Define hypothesis and outline the steps involved in hypothesis testing.
- OR**
- V. Elaborate the use of statistics in Architectural Research and describe the two major areas of statistics: Inferential and Descriptive.
- VI. Write the Structure of a Journal paper. What are the various steps in publishing paper in a reputed journal?
- OR**
- VII. Write in details about the structure of a Research Report.
- VIII. What is behavioural research? Differentiate between unobtrusive and obtrusive measures in behavioural research.
- OR**
- IX. What is field survey and what are its advantages and disadvantages as a research method?
