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B.Arch. Degree VII Semester Examination November 2020**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:
- Why Urban Design is important?
 - Urban Grain and Urban texture.
 - Elements of imageability.
 - Urban design principles.
 - Christopher Alexander.
 - Urban design survey methods.
 - Urban Conservation
 - Pedestrian areas.

PART B

(4 × 15 = 60)

- II. Explain the elements of urban design through a case study of a city/town.
OR
- III. Elaborate on the need of urban designer in contemporary India.
- IV. Discuss the relation between urban scale, massing and the quality of urban enclosure.
OR
- V. Describe briefly imageability and legibility and analyze concepts of the book "The Image of the city" by Kevin Lynch using your city as an example.
- VI. What is a Skyline? Explain in detail the concept of skyline studies in Urban Design with an example.
OR
- VII. Write briefly on the Urban design theories put forwarded by Kevin Lynch, Le Corbusier, Jane Jacobs and Christopher Alexander.
- VIII. Discuss the benefits and effects of urban renewal. How different urban renewal schemes are implemented?
OR
- IX. Write briefly on the current scenario of waterfront developments in the light of Indian cities.

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B.Arch. Degree VII Semester Examination November 2020**AR 1703 HOUSING***(2014 Scheme)*

Time: 3 Hours

Maximum Marks: 100

PART A
(Answer *ALL* questions)

(8 × 5 = 40)

- I. Write short notes on:
- Effect of Housing Shortage in India.
 - Impact of Urbanization on Housing
 - LIFE Mission
 - National Urban Rental Housing Policy
 - VAMBAY
 - Basic features of Aided self help housing.
 - HDFC
 - Informal Housing Finance

PART B

(4 × 15 = 60)

- II. What are the determinants or factors affecting supply and demand for housing? Explain how housing shortage is calculated.
- OR**
- III. Explain the various government efforts for housing under five year plans.
- IV. Discuss on the characteristics of slums. Explain any two slum improvement schemes implemented in India.
- OR**
- V. Describe the strategies adopted for RAY and PMAY to ensure housing for various income categories.
- VI. How do NGO's help in reducing the shortage of houses through innovative housing schemes?
- OR**
- VII. What are the objectives and priorities of various Housing Policies in India?
- VIII. Explain the various sources of Housing finance in India. Comment on the importance of Housing finance institutes in ensuring housing for all.
- OR**
- IX. Discuss the role of National Housing Bank and HUDCO as two important bodies for housing finance.

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B.Arch. Degree VII Semester Examination November 2020

AR 1704 INTERIOR DESIGN
(2014 Scheme)

Time : 4 Hours

Maximum Marks : 100

PART A
(Answer *ALL* questions)

(8 × 5 = 40)

- I. Write short notes on the following:
- (a) Function of surfaces.
 - (b) Organization of space.
 - (c) Point and line elements in Interior.
 - (d) Vertical Garden.
 - (e) Types of finishes for floors.
 - (f) Role of furnishing in interiors.
 - (g) Types of lighting fixtures.
 - (h) Colour wheel.

PART B

(1 × 60 = 60)

- II. Design a three star hotel lobby. The space should accommodate the following:
(Total area : 40 sq.m)

- (i) Reception area
- (ii) Lounge

Requirements:

- (a) Detailed plan of the interior 1:20 (30)
- (b) Sectional interior perspective showing the details of flooring and roofing pattern. (20)
- (c) Furniture design of reception desk. (10)

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B.Arch. Degree VII Semester Examination November 2020

AR 1705 DESIGN ASPECTS OF EARTH QUAKE RESISTANT STRUCTURES (2014 Scheme)

Time : 3 Hours

Maximum Marks : 100

PART A (Answer *ALL* questions)

(8 × 5 = 40)

- I. Write short notes on:
- (a) How the quality of construction and materials affect the performance of the structure?
 - (b) Formulate the basic equation of base excited dynamic system with figure.
 - (c) Advantages and disadvantages of Mode Superposition method.
 - (d) Response Spectrum method and discuss its significance.
 - (e) Explain the requirements and importance of ductility in seismic resistant building.
 - (f) Various factors affecting ductility and also explain its impacts.
 - (g) Briefly explain the consideration of Seismic isolation.
 - (h) Basic elements of seismic isolation and its feasibility.

PART B

(4 × 15 = 60)

- II. How does the lateral load resisting system work and explain it with neat sketches?
- OR**
- III. Explain the effects of building characteristics on its seismic performance.
- IV. Explain equivalent static method of analysis, mention its merits and demerits.
- OR**
- V. Explain Dynamic time history analysis of structures subjected to seismic action and its limitations.
- VI. Explain structural or element ductility in detail; also explain the concept of ductile detailing.
- OR**
- VII. Explain ductile detailing considerations of beams as per IS 13920 - 1993.
- VIII. Explain the design principle of Seismic isolation.
- OR**
- IX. Explain merits and demerits of seismic isolation along with its configuration.

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B.Arch. Degree VII Semester Examination November 2020

AR 1706 (a) SUSTAINABLE ARCHITECTURE (2014 Scheme)

Time: 3 Hours

Maximum Marks: 100

PART A (Answer *ALL* questions)

(8 × 5 = 40)

- I. Write short notes on the following:
- Carrying capacity
 - Ethics of sustainability
 - Bio-mimicry in architecture
 - Recycling in the context of sustainability
 - Most widely used green building rating systems
 - LEED
 - Social Dimension of sustainability
 - Study methods of Urban ecology

PART B

(4 × 15 = 60)

- II. Explain the visions of sustainability, in focus with Sustainable Development Goals of UN.
- OR**
- III. Discuss about the emerging vulnerabilities of global warming and climate change and the developments of concepts of sustainability in the light of it.
- IV. Explain the concept of Life cycle analysis/Assessment and LCA phases.
- OR**
- V. Discuss the Concept of Eco Architecture and its material Selection criteria.
- VI. Discuss briefly the concept of Green Rating systems. Explain in detail, History, Goals, Rating Criteria, Certification Factors and Point System of any one such system.
- OR**
- VII. Critically examine any case study for a Green rated project. Explain the rating Criteria based on the green rating system followed.
- VIII. Explain urban ecology, effects of it on the environment and the phenomenon of urban heat island.
- OR**
- IX. Discuss the concept and functioning of sustainable communities with the help of a suitable example.

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B.Arch. Degree VII Semester Examination November 2020**AR 1706 (b) COST EFFECTIVE TECHNOLOGY**
(2014 Scheme)

Time: 3 Hours

Maximum Marks: 100

PART A
(Answer *ALL* questions)

(8 × 5 = 40)

- I. Write short notes on the following:
- Need for cost effective technique in building construction.
 - Nirmithi kendra
 - CBRI and SERC
 - Discuss any one organic building material for wall construction
 - Discuss any one innovative construction technique for roofing material.
 - Prefabrication
 - Laurie Baker
 - Bamboo construction

PART B

(4 × 15 = 60)

- II. Explain the various cost reduction techniques that can be applied in substructure of buildings up to three storey.
- OR**
- III. How do you bring cost effectiveness in the construction stage of a building?
- IV. Discuss in detail the various indigenous building materials commonly used in south India.
- OR**
- V. Recycled plastics are used in new building and construction. Discuss its merits and demerits.
- VI. Discuss any two innovative technology/alternate technologies which can be adopted for flood affected areas in Kerala.
- OR**
- VII. Discuss various precast construction techniques adopted in building construction.
- VIII. Analysis the local adaptation of the innovative technologies in terms of initial investment, maintenance cost and longevity of buildings.
- OR**
- IX. Discuss the various measures that have to be considered in reducing the cost of several rehabilitation housing projects in India.

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B.Arch. Degree VII Semester Examination November 2020

AR 1707 (d) VERNACULAR ARCHITECTURE (2014 Scheme)

Time : 3 Hours

Maximum Marks : 100

PART A (Answer *ALL* questions)

(8 × 5 = 40)

- I. Write short notes on the following:
- Vernacular Architecture.
 - Factors Influencing Vernacular Architecture
 - Components of Vernacular Architecture
 - Vernacular aspects of Le Corbuiser
 - Naalukettu Typology in Kerala
 - Myths about Traditional Buildings
 - Climatic Significance of a courtyard
 - Any one vernacular Material and its properties.

PART B

(4 × 15 = 60)

- II. Elements of sustainable design are integral to Vernacular architecture. Explain with an example.
- OR**
- III. Explain with an example how vernacular architecture is fine tuned through repeated trial and error.
- IV. Discuss the influence of culture and traditions on vernacular architecture with an example.
- OR**
- V. Describe the systematic methods of study in Vernacular Architecture.
- VI. Describe the views of Amos Rappoport on the influence of culture on the form of habitats. Give examples.
- OR**
- VII. Discuss on the Elements of Vernacular Architecture influenced by Religion.
- VIII. Explain disaster resistance construction techniques in vernacular construction with an example.
- OR**
- IX. Explain vernacular construction in Indian context with example and sketches.

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B.Arch. Degree VII Semester Examination November 2020**AR 1707 (a) RESEARCH METHODOLOGY AND STATISTICS
(2014 Scheme)***(Illustrate all answers with sketches)*

Time: 3 Hours

Maximum Marks: 100

**PART A
(Answer ALL questions)****(8 × 5 = 40)**

- I. Write short notes on the following:
- Extraneous variable and co founded relationship
 - Criteria for good research
 - Semantic scale
 - Dichotomous framework
 - Oral presentation
 - Techniques in interpretation
 - Types of interviews
 - Sampling and census

PART B**(4 × 15 = 60)**

- II. Describe various uses of literature review with diagram.
OR
- III. Explain Research paradigms in qualitative research in detail with diagrams.
- IV. What is hypothesis, null hypothesis? Explain basic concepts concerning testing of hypothesis.
OR
- V. Explain in detail about correlation and regression in statistics.
- VI. Explain in detail on "the layout structure of research report".
OR
- VII. Describe the types of research reports in detail.
- VIII. Describe data collection methods in qualitative research and its limitation with examples.
OR
- IX. Explain different types of sampling methods and its advantages.
