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***B.Arch. Degree VII Semester Regular/Supplementary Examination
November 2021***

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

Time : 3 Hours

Maximum Marks : 100

**PART A
(Answer ALL questions)**

(8 × 5 = 40)

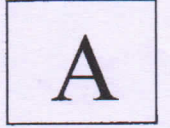
- I. Write short notes on the following:
- Elements of urban design.
 - Urban form and pattern.
 - Grain and Texture.
 - Urban spaces and enclosures.
 - Urban design surveys.
 - Serial vision.
 - Christopher Alexanders theory of Urban design.
 - Waterfront development.

PART B

(4 × 15 = 60)

- II. Define urban design, its scope and objectives? Explain the relevance of urban design in this fast urbanizing world.
- OR**
- III. Distinguish between Architecture, Urban Design and Urban Planning. Explain the level of interaction between these fields in shaping urban areas.
- IV. Briefly describe the principles of urban spatial structure.
- OR**
- V. Explain the image of the city and its elements according to the principle of Kevin Lynch.
- VI. Describe the Urban design theories introduced by Christopher Alexander.
- OR**
- VII. Explain Figure ground theory, Linkage theory and Place Theory.
- VIII. Discuss various urban design policies, its scope and procedure.
- OR**
- IX. Explain with example the scenario of water front development in Indian cities.

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***B.Arch. Degree VII Semester Regular/Supplementary Examination
November 2021***

**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:
- (a) Housing stock
 - (b) Evolution of housing policies in India
 - (c) Habitable room
 - (d) Housing issues parameters in urban and rural area
 - (e) Housing finance sources
 - (f) Aided Self Help Housing
 - (g) Affordable housing
 - (h) Role of LIC in housing finance

PART B

(4 × 15 = 60)

- II. Establish the role of housing at the national level by analysing the changing priorities in its housing policies carried out in Five year plans.
- OR**
- III. Urbanisation has caused poverty issues in India. Establish narrating the character and causes of poverty.
- IV. India has evolved from a strategy of slum clearance to slum improvement over the years after independence. Narrate with suitable examples.
- OR**
- V. Explain how housing design and standards are set to conform to socio economic and climatic conditions in India.
- VI. Describe the evolution of National Urban Housing and Habitat policy 2007 quoting its features.
- OR**
- VII. Explain the role of NGO and beneficiary participation in aided self help housing the poor.
- VIII. Land, finance and population are the three determinants of housing. Establish this statement with affordable housing for all by Ministry of Housing and Urban Poverty Alleviation as a strategy to manage the widening housing gap in India.
- OR**
- IX. Describe housing finance types and characteristics in India.

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***B.Arch. Degree VII Semester Regular/Supplementary Examination
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**AR 1704 INTERIOR DESIGN
(2014 Scheme)**

Time : 4 Hours

Maximum Marks : 100

(Use Illustrations wherever required. Illustrations carry due credits)

PART A

(Answer **ALL** questions)

(8 × 5 = 40)

I. Write short notes on the following.

- (a) Principles of growth in organizing spaces in architecture, two and three dimensionally.
- (b) Texture and Pattern
- (c) Principles of visual composition
- (d) Colours in Interiors
- (e) Ergonomics
- (f) Maintaining interior plants in public buildings.
- (g) Importance of plantscaping in interiors
- (h) Discuss any four types of plants used in interiors

PART B

(1 × 60 = 60)

II. Design an interior of a five star hotel lobby of approximate area 60 sq.m having reception, executive waiting area etc. Assume data whatever necessary. Specific all materials being used with dimensions.

Requirements:

- (i) Detailed plan of the interior – 1:20 scale (30)
- (ii) Sections giving maximum details – 1:20 scale (20)
- (iii) Perspective views (10)

The design scheme should also include floor and ceiling design.

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***B.Arch. Degree VII Semester Regular/Supplementary Examination
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**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 the following.
- What is shear wall? Describe its purpose in multi-storeyed building.
 - Effects of building's characteristics on its seismic performance
 - Equivalent static analysis of structure subjected to seismic action.
 - Briefly explain the principle of mode superposition method.
 - Explain how ductility of a structure affects its seismic performance.
 - What are the characteristics of response spectrum?.
 - What are the advantages of base isolated structures?.
 - Explain the criteria to be considered for seismic isolation.

PART B

(4 × 15 = 60)

- II. Briefly explain the factors which ensure proper seismic behavior of a building.
- OR**
- III. How is the structural performance affected by the quality of construction and materials? Explain.
- IV. Explain the step-by-step procedure to compute the design seismic forces, in a multi storied framed structure, using equivalent static method.
- OR**
- V. Briefly explain Dynamic time history analysis of structures subjected to seismic action and discuss its significance.
- VI. Briefly explain the various techniques to improve the ductility of RC structures.
- OR**
- VII. How is ductility assessed? Explain the various ductility factors.
- VIII. Explain the feasibility of seismic isolators in the present day scenario of Kerala.
- OR**
- IX. With neat sketches, explain the various elements of base isolation systems.

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B.Arch. Degree VII Semester Regular/Supplementary Examination
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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.
- Ethics of sustainability.
 - Climate change and Sustainability.
 - Bio mimicry and bio mimetic architecture.
 - Need of reducing embodied energy.
 - Name and expand the three primary rating systems for Green buildings in India.
 - GRIHA rating certification system.
 - UHI.
 - Three pillars of sustainability.

PART B

(4 × 15 = 60)

- II. Explain the concept of sustainability and Causes of unsustainability. And elaborate on Relation between ecological foot print and sustainability.
- OR**
- III. Define "Sustainability" based on Brundtland report. Explain the historical background and mandate of Brundtland report.
- IV. Define and elaborate on the stages of Life cycle analysis. And explain how life cycle assessment of building helps to achieve sustainability.
- OR**
- V. Define Embodied Energy, what is the need to reduce it in building industry and explain the methods to reduce the EE in an effective manner.
- VI. What is a green building? Explain the key features of a green building quoting CII- Sohrabji Godrej Green Business Centre, Hyderabad as an example.
- OR**
- VII. Explain the Key Components of LEED Rating system. And elaborate on the evaluation procedure and criteria mentioned in the LEED rating system.
- VIII. Explain Urban Ecology and its relevance in the current scenario. Define and elaborate on Urban ecosystem.
- OR**
- IX. Explain the socio economic and environmental dimensions of Sustainability. Describe the concept of sustainable community.

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***B.Arch. Degree VII Semester Regular/Supplementary Examination
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**AR 1707(a) RESEARCH METHODOLOGY AND STATISTICS
(2014 Scheme)**

Time : 3 Hours

Maximum Marks : 100

**PART A
(Answer ALL questions)**

(8 × 5 = 40)

- I. (a) What are the main objectives of doing research?
- (b) Write short note on paradigms of qualitative research.
- (c) Explain briefly the Relevance of statistics in research.
- (d) Differentiate between discrete and continuous variable.
- (e) What is the significance of a Title in Research.
- (f) Justify the importance of Referencing.
- (g) Define Behavioral Research.
- (h) List five types of Questionnaires.

PART B

(4 × 15 = 60)

- II. Explain Research process in detail through a flow chart.
OR
- III. Elaborate on the structure of Literature review in research process.
- IV. Explain in detail the testing of Hypothesis.
OR
- V. Explain in detail the two major areas of statistics: Inferential and Descriptive.
- VI. Explain in detail the essence of an abstract content supported by an example.
OR
- VII. Explain the structure of a Research Report.
- VIII. Explain the development of a good Questionnaire.
OR
- IX. Field Survey plays an important part in data collection in quantitative research. Elaborate on the process in detail.

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***B.Arch. Degree VII Semester Regular/Supplementary
Examination November 2021***

AR 1707 (d) VERNACULAR ARCHITECTURE

(2014 Scheme)

(Include illustrative sketches and examples wherever necessary)

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.
 - Courtyards in India.
 - Symbolism in vernacular architecture.
 - Nalukettu – house typology in Kerala.
 - Myths and misconception about tradition buildings.
 - Vernacular aspects of Laurie Baker.
 - Role of folk art in vernacular architecture.

PART B

(4 × 15 = 60)

- II. Vernacular architecture is a refined form of architecture due to its repeated trial and error methods – Discuss.
- OR**
- III. Vernacular Architecture is an approach towards a sustainable future architecture- Discuss.
- IV. Discuss the influence of culture and traditions on vernacular architecture with an example.
- OR**
- V. Discuss the influence of climate on vernacular architecture with an example.
- VI. (a) Discuss the need for studying vernacular architecture with an example.
(b) Discuss the various approaches to study vernacular architecture.
- OR**
- VII. (a) Discuss the criteria for selection of buildings for documentation.
(b) Elaborate on any two approaches of documentation with an example for each.
- VIII. Discuss the evolution and planning of one vernacular settlement in Kerala.
- OR**
- IX. Discuss with an example the vernacular architecture of any one state in India.