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***B.Arch. Degree VIII Semester Regular Examination May 2025*****AR 1807 (a) ENERGY EFFICIENT ARCHITECTURE (ELECTIVE IV)  
(2021 Scheme)**

Time: 3 Hours

Maximum Marks: 100

**PART A  
(Answer ALL questions)**

(8 × 5 = 40)

- I. (a) Significance of plan form in passive design.  
(b) Factors influencing thermal performance of a wall.  
(c) Solarium.  
(d) Nocturnal radiation cooling.  
(e) Battery Technology.  
(f) Smart Materials.  
(g) Role of nature-inspired elements in biophilic architecture.  
(h) Energy effectiveness of biophilic architecture.

**PART B**

(4 × 15 = 60)

- II. Discuss the role of passive design in achieving energy efficiency. How does it contribute to reducing energy consumption?

**OR**

- III. Explain the various modes of heat transfer in buildings. How can materials and design strategies be used to control heat gain and loss?

- IV. What is Passive cooling? Explain any three Passive cooling technologies.

**OR**

- V. Explain the importance of daylighting in building design. What is daylight factor and the methods used for daylight analysis?

- VI. Discuss contemporary and future trends in energy-efficient building design.

**OR**

- VII. Evaluate the significance of recycled and reusable building materials in sustainable architecture.

- VIII. Explain the principles and benefits of biophilic design.

**OR**

- IX. Explain the patterns of biophilic design.

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**B.Arch. Degree VIII Semester Regular Examination May 2025****AR 1802 PROFESSIONAL PRACTICE**  
(2021 Scheme)

Time: 3 Hours

Maximum Marks: 100

**PART A**  
(Answer *ALL* questions)

(8 × 5 = 40)

- I. Write short notes on the following:
- (a) The Royal Institute of British Architects.
  - (b) Role of professional society.
  - (c) System approach for pre-construction stage.
  - (d) Various licenses needed for architects in Kerala.
  - (e) Liquidated damages.
  - (f) Tender document.
  - (g) Urban Land Ceiling Act.
  - (h) Arbitration.

**PART B**

(4 × 15 = 60)

- II. What are the responsibilities and liabilities of an architect towards the client?
- OR**
- III. Briefly discuss the various stages of architectural design and the specific task associated in each of such stage.
- IV. Examine the impact of the Architects Act, 1972 on the architectural profession and education in India. How did the Act contribute to maintain professional standards and regulate architectural education?
- OR**
- V. Discuss the concept of professional partnership in architecture, its types, and advantages. Elaborate on the responsibilities and liabilities of partners in such professional collaborations.
- VI. Explain the duties and liabilities of the contractor, architect and client under a construction contract. Discuss their roles and responsibilities in ensuring successful project execution.
- OR**
- VII. Briefly discuss the types of contracts and contract document. What are the various conditions of contract as published by Indian Institute of Architects?
- VIII. Elaborate on Real Estate Regulatory Authority. Discuss its importance in current real estate of Kerala and India.
- OR**
- IX. Discuss the concept of easement rights and the process of acquiring such rights. Explain the legal remedies available for interference with easement rights and the consequences of their loss.

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**B.Arch. Degree VIII Semester Regular Examination May 2025****AR 1803 HOUSING**  
(2021 Scheme)

Time: 3 Hours

Maximum Marks: 100

**PART A**  
(Answer *ALL* questions)

(8 × 5 = 40)

- I. (a) Estimation of housing shortage.  
(b) National housing policy.  
(c) Housing for aged person.  
(d) PMAY.  
(e) Mass housing programs.  
(f) Housing satisfaction.  
(g) Aided self-help housing.  
(h) HUDCO.

**PART B**

(4 × 15 = 60)

- II. Discuss the role of housing in social and economic development of a nation. Elaborate on the nature and magnitude of housing shortage in India.

**OR**

- III. Analyse the various efforts taken by the government of India to address the issues in housing through National Five-Year Plans.

- IV. Comment on the importance of design standards and norms in housing. Also elaborate on the various principles of housing standards.

**OR**

- V. Define slum and its characteristics. Explain in detail any two slum improvement schemes successfully implemented in India.

- VI. Discuss the importance of conducting Post Occupancy Evaluations (POE) in public housing projects. What are the different components and methods in POE?

**OR**

- VII. Discuss the characteristics and efficiency of rural housing in different climatic zones in India.

- VIII. Illustrate with two relevant case studies, on innovative housing projects in India and Kerala.

**OR**

- IX. Elaborate sources of housing finance and its essential characteristics. Discuss the different roles of National Housing Bank as an apex organisation in housing.

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***B.Arch. Degree VIII Semester Regular Examination May 2025*****AR 1804 URBAN DESIGN  
(2021 Scheme)**

Time : 3 Hours

Maximum Marks : 100

**PART A  
(Answer *ALL* questions)**

(8 × 5 = 40)

- I. Write short notes on the following.
- (a) Streets and Buildings as elements of Urban Design.
  - (b) Comparison between an Architect, Urban Designer and Urban Planner.
  - (c) Serial Vision.
  - (d) Imageability in urban Design.
  - (e) New Urbanism.
  - (f) Mixed Use Development.
  - (g) Urban Conservation.
  - (h) Urban Design Survey -Analysis of Data and interpretation.

**PART B**

(4 × 15 = 60)

- II. Describe in detail the elements and principles of urban forms with necessary sketches and examples from different cities .
- OR**
- III. How did urban design evolve as a discipline and what are the realms attached to urban design ?
- IV. Analyse the concepts and theories of William H. White and their influences on urban Design.
- OR**
- V. Compare the theories of Leon Krier and Rob Krier evaluating their relevance to modern urban design.
- VI. Explain the process of reading of Urban Fabric through various representation techniques and methods, parameters and attributes for urban analysis.
- OR**
- VII. Explain transit oriented development and analyse its impact on mobility with relevant case studies.
- VIII. Analyse the role of economic considerations in urban conservation and describe the urban design projects at various scales using case studies.
- OR**
- IX. Explain in detail the importance of road form and hierarchy, road patterns in urban design with relevant examples.

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***B.Arch. Degree VIII Semester Regular Examination May 2025*****AR 1805 PROJECT MANAGEMENT  
(2021 Scheme)**

Time: 3 Hours

Maximum Marks: 100

**PART A  
(Answer *ALL* questions)**

(8 × 5 = 40)

- I. (a) Discuss the significance of project management systems in the construction industry and their impact on project success.
- (b) Write short note on the types of construction projects.
- (c) Write the advantage and disadvantages of bar chart in scheduling.
- (d) Write short note on WBS.
- (e) What do you mean by resource levelling?
- (f) What is resources management?
- (g) What are the general conditions of a construction contract and why are they important for project execution?
- (h) Explain the different types of building contracts and discuss their merits and demerits.

**PART B**

(4 × 15 = 60)

- II. Describe the importance of project planning, scheduling, and controlling in construction project management. How do these elements contribute to the success of a project?

**OR**

- III. Discuss the key stakeholders in the construction industry and their roles, responsibilities and functional relationships in a construction project.

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B.Arch-VIII(R)-05-25-4187

- IV. Draw the network diagram and mark the critical path. Calculate the EST, LST, EFT, LFT and the floats Total float, Free float, Interfering float, Independent float.

Activity	Predecessor	Duration
A	-	6
B	A	9
C	A	3
D	B	8
E	A	1
F	C	4
G	D	1
H	E	2
I	F	1
J	G,H,I	6

OR

- V. Explain project scheduling. What are the steps to have a successful project schedule?
- VI. What do you mean by depreciation? What are the methods to estimate depreciation?

OR

- VII. What are the different methods of resource management?
- VIII. Describe the tendering process in detail, including the types of tenders, key contents of a tender document and the significance of general conditions of contract in ensuring project success.

OR

- IX. Discuss the key provisions of a construction contract, including security deposits, interim certificates, defect liability periods, retention amounts, mobilization money and virtual completion. How do these provisions protect both the client and the contractor?

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***B.Arch. Degree VIII Semester Regular Examination May 2025*****AR 1806 (b) DESIGN INCLUSIVITY FOR SPECIAL NEEDS (ELECTIVE III)  
(2021 Scheme)**

Time: 3 Hours

Maximum Marks: 100

**PART A  
(Answer *ALL* questions)**

(8 × 5 = 40)

- I. (a) Historical evolution of accessibility.  
(b) Core principles of Inclusive Design.  
(c) Right of Persons with Disabilities Act.  
(d) Specialist furniture and adaptive equipment for multi-disability spaces.  
(e) Deafscape design strategies.  
(f) Sensory Design.  
(g) Design strategies for enhancing accessibility for the blind.  
(h) Wayfinding strategies in public buildings.

**PART B**

(4 × 15 = 60)

- II. Discuss the importance of universal design in modern architecture. How do its principles ensure accessibility for individuals with diverse needs? Provide relevant examples.

**OR**

- III. Describe the different types of disabilities and special needs considered in inclusive design. How can architects integrate design solutions to improve accessibility for each category?

- IV. Explain key national and international policies on accessibility and universal design. How do these policies shape architectural practices and what challenges are faced in their implementation?

**OR**

- V. Discuss the role of assistive technologies in inclusive design for individuals with diverse needs. Provide examples of assistive tools in architecture and explain their impact on mobility, communication and user experience.

- VI. How can inclusive design ensure safety and security for individuals of all abilities in built environments? Discuss key strategies with examples.

**OR**

- VII. Discuss the role of sensory awareness in creating a conducive learning environment. How can design strategies accommodate different sensory needs to enhance learning experiences? Provide examples.

- VIII. Explain the design strategies, spatial arrangements and adaptive features that ensure accessibility, comfort and engagement for all users in an inclusive childcare center, with a focus on children with autism spectrum disorder. Support your answer with a relevant case example.

**OR**

- IX. You are designing a community center that aims to be fully inclusive for individuals with special needs. Describe the key design considerations you would incorporate to ensure accessibility for people with physical, sensory, and cognitive disabilities. Provide specific examples.