B.Arch-VII(R/S)-11-25-4396 Reg. No. | | | | | | | | |

B

B.Arch. Degree VII Semester Regular/Supplementary Examination November 2025

AR 1702 ESTIMATION, COSTING AND SPECIFICATION
(2021 Scheme)

Time: 3 Hours Maximum Marks: 100

PART A
(Answer **ALL** questions)

(8 × 5 = 40)

I. (a) Define estimating and costing. State their purpose in building projects.
(b) List the data required for preparing an estimate.
(c) What is the difference between approximate estimate and detailed estimate?
(d) Explain the term Bill of Quantities (BOQ) and its importance.
(e) Explain the term analysis of rates (AOR).
(f) Define costing and state its purpose in construction projects.
(g) Write the specification for cement concrete (1:2:4).
(h) Explain how specifications influence the cost of a project.

PART B

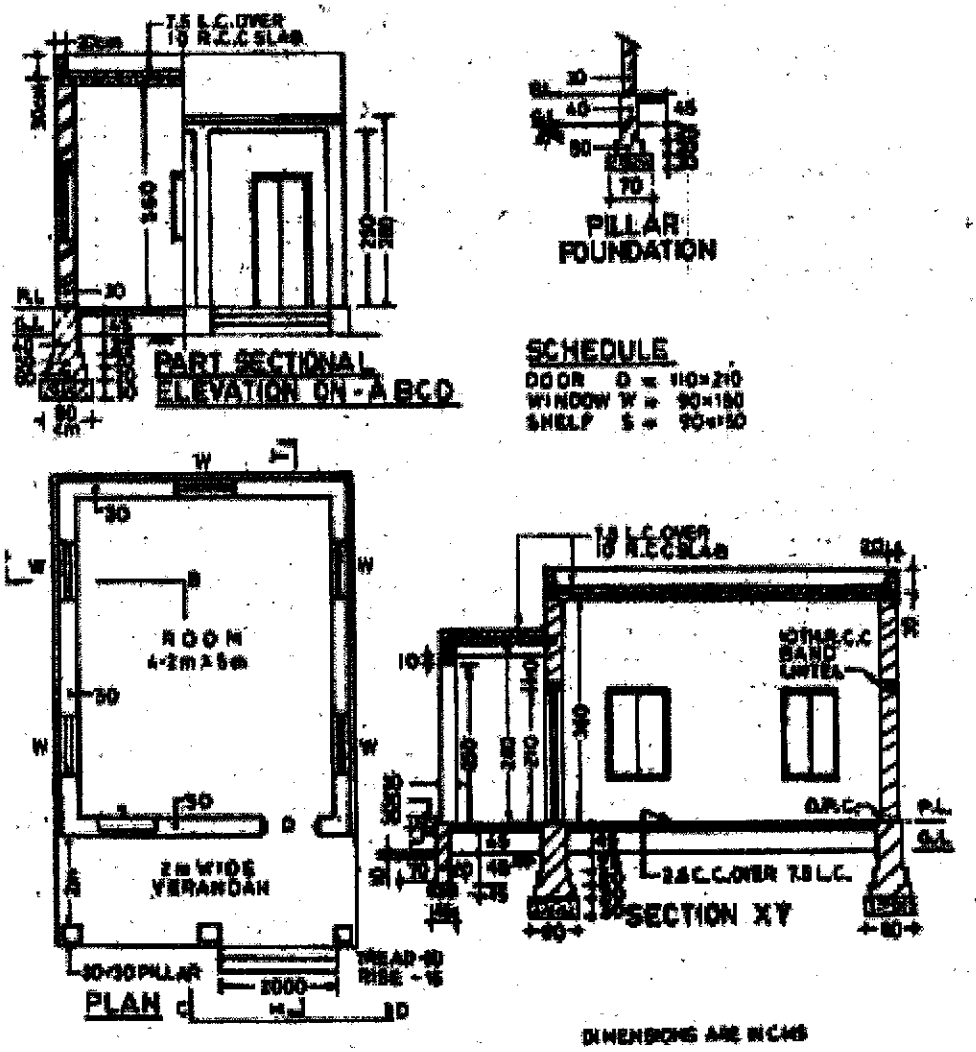
(4 × 15 = 60)

II. Compare and contrast Long Wall–Short Wall Method and Centre Line Method of quantity estimation with neat sketches.

OR

III. Plan and section of a one roomed building is shown in figure. Prepare an estimate for the following items of the building.
(i) Earthwork excavation in foundation.
(ii) Lime concrete in foundation.
(iii) First class brickwork in cement mortar (1:6) for foundation and plinth.
(iv) 2.5 cm thick DPC.
(v) First class brick work in superstructure.

(P.T.O.)



IV. Differentiate between the plinth area method, cubical contents method and centre line method with suitable examples.

OR

V. Explain the procedure for preparing a detailed estimate for a simple single-storey residential building.

VI. Prepare a rate analysis for 1 m^3 of brickwork in cement mortar (1:6) using the following data:

(i) Cost of bricks = ₹7,000 per 1000 bricks
(ii) Cement = ₹400 per bag (50 kg)
(iii) Sand = ₹1,200/m^3
(iv) Labour = ₹700/m^3

OR

VII. Explain the method of preparing an analysis of rates for brickwork and plastering.

VIII. Write detailed specifications for the following

(i) Brickwork in cement mortar (1:6)
(ii) Cement plaster (1:4)

OR

IX. Discuss how specifications impact costing and quality control in construction projects.

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B.Arch-VII(R/S)-11-25-4397 Reg. No. | | | | | | | | |

C

B.Arch. Degree VII Semester Regular/Supplementary Examination November 2025

AR 1703 HUMAN SETTLEMENTS-HISTORY AND PLANNING

(2021 Scheme)

Time: 3 Hours Maximum Marks: 100

(Illustrations in answers carry due marks)

PART A

(Answer ***ALL*** questions)

(8 × 5 = 40)

I. Write short notes on

(a) Renaissance City

(b) Agora and Acropolis

(c) Garden Cities

(d) Urban Node

(e) Land Pooling

(f) Urban land use

(g) Land Acquisition Act

(h) Smart Cities

PART B

(4 × 15 = 60)

II. Discuss the town planning principles followed in planning the city of 'Ur' in Ancient Mesopotamia.

OR

III. Describe the salient features of town planning in Ancient India with the examples of two cities.

IV. Comment on the concept of "Survey before Plan" with the contributions of Patrick Geddes.

OR

V. Explain the concept of Radiant City and the contributions of Le Corbusier to modern town planning.

VI. Discuss in detail the different types of plans prepared in India as per URDPFI Guidelines.

OR

VII. Impact of urbanization on cities, Urban environmental problems.

VIII. Discuss the changes brought by 74th Amendment Act 1992 to Indian Planning process. Also explain about the Functions and Powers assigned to Urban local Bodies.

OR

IX. Elaborate on the importance of Coastal Regulation Zones. Explain in detail the development regulations for different zones as per Coastal Regulation Zone Act 2019.

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B.Arch-VII(R/S)-11-25-4398 Reg. No. | | | | | | | | |

C

B.Arch. Degree VII Semester Regular/Supplementary Examination November 2025

AR 1704 DESIGN ASPECTS OF EARTHQUAKE RESISTANT BUILDINGS

(2021 Scheme)

Time: 3 Hours Maximum Marks: 100

PART A

(Answer **ALL** questions)

(8 × 5 = 40)

I. Write short notes on:

(a) Magnitude and Intensity of earthquake.

(b) Effect of mass and vertical irregularity on structures.

(c) Base shear calculation as per Indian standards.

(d) Strong column Weak beam concept.

(e) Reinforcement detailing of beams in seismic resistant structures.

(f) Requirement of ductility in good seismic resistant structures.

(g) Earthquake effects on Non-Structural Elements.

(h) Retrofitting of RC and masonry buildings.

PART B

(4 × 15 = 60)

II. Explain the effect of earthquake in ground and in building structures.

OR

III. Explain in detail about the effect of Architectural features in buildings during an Earthquake.

IV. Explain a review about the latest Indian Standard Seismic Code IS 1893-2016 part-I.

OR

V. Explain Response Spectrum method.

VI. What are the important codal design provisions recommended by IS 13920 for the design of beams in earthquake prone areas?

OR

VII. Explain the ductility considerations and assessment of ductility in earthquake resistant RCC buildings.

VIII. Explain the seismic vulnerability assessment of RC building and masonry buildings.

OR

IX. Explain the methods of retrofitting of RC and masonry buildings.

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B.Arch-VII(R/S)-11-25-4399 Reg. No. | | | | | | | | |

B

B.Arch. Degree VII Semester Regular/Supplementary Examination November 2025

AR 1705(a) RESEARCH METHODOLOGY (ELECTIVE I)
(2021 Scheme)

Time: 3 Hours Maximum Marks: 100

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

(8 × 5 = 40)

I. Write short notes on
- (a) Objectives of Research
- (b) Inductive research
- (c) Important features of a research design
- (d) Hypothesis and characteristics
- (e) Frequency table and pie chart
- (f) Likert scale
- (g) Need for data Interpretation
- (h) Plagiarism

PART B

(4 × 15 = 60)

II. Define the term Understanding the language of Research. Explain the key aspects of understanding the language of research.

OR

III. Describe in detail the research process and list out the components of research process.

IV. Elaborate on the different concepts related to research design.

OR

V. What is meant by Hypothesis? Discuss in detail the qualities of a good hypothesis.

VI. Describe Validity and Reliability in research measurement and its types.

OR

VII. Explain the Probability sampling and its types.

VIII. Briefly describe data preparation and its benefits. List out the various steps in Data preparation and elaborate.

OR

IX. What are the ethical issues related to the researcher? Explain Plagiarism, self-plagiarism and other common ethical issues in publishing.

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B.Arch-VII(R/S)-11-25-4401 Reg. No. | | | | | | | | |

B

B.Arch. Degree VII Semester Regular/Supplementary Examination November 2025

AR 1706 (a) SUSTAINABLE ARCHITECTURE (ELECTIVE II)
(*2021 Scheme*)

Time: 3 Hours Maximum Marks: 100

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

(8 × 5 = 40)

I. Write short notes on the following:
- (a) Scale and context of sustainability
- (b) Carrying Capacity
- (c) Difference between Green and Sustainability.
- (d) Energy consumption of buildings
- (e) Bio mimicry
- (f) 3 R's in sustainability
- (g) BREEAM
- (h) Urban Ecology

PART B

(4 × 15 = 60)

II. Discuss the various pillars of sustainability. How do these aspects influence one another in achieving overall sustainable development?

OR

III. Trace the history and development of sustainability from early human lifestyles to the present. How has the understanding of sustainability evolved over time?

IV. Discuss the major national and international policies and regulations related to sustainability in the built environment.

OR

V. Examine the effects of climate change and global warming on the built environment. Suggest sustainable strategies to mitigate their impact.

VI. Explain the concept of Vernacular Architecture. Discuss its relevance in today's context of sustainability and climate-responsive design.

OR

VII. Describe the concept of Life Cycle Analysis (LCA) in building design. How does it help in understanding and minimizing environmental impacts?

VIII. Discuss the causes and impacts of Urban Heat Island (UHI) effects. Discuss the strategies to reduce UHI in urban areas.

OR

IX. Define Sustainable Communities. Discuss the concept of Sustainable Communities with the help of an example.

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B.Arch-VII(R/S)-11-25-4402 Reg. No. | | | | | | | | |

B

B.Arch. Degree VII Semester Regular/Supplementary Examination November 2025

AR 1706 (c) FUTURISTIC ARCHITECTURE (ELECTIVE II)
(*2021 Scheme*)

Time: 3 Hours Maximum Marks: 100

PART A
(Answer **ALL** questions)

(8 × 5 = 40)

I. (a) Antonio Sant'Elia's vision for the Futurist city.
(b) Futurism in architecture.
(c) Biomimicry in architecture.
(d) Dynamic Architecture.
(e) Smart Homes.
(f) Futuristic workplace.
(g) Net-Zero design.
(h) Resource-Efficient building systems.

PART B

(4 × 15 = 60)

II. Compare early Futurist visions with contemporary futuristic design ideologies.

OR

III. Critically analyze the global approach in futuristic architecture with examples.

IV. Explain the evolution of contemporary architectural concepts including biomimicry, adaptive reuse and low-cost architecture.

OR

V. Explain adaptive reuse as a contemporary approach shaping the future of architecture.

VI. Discuss emerging trends in futuristic office spaces, public buildings and skyscrapers.

OR

VII. Examine futuristic approaches to designing smart homes and public buildings using global examples.

VIII. Discuss sustainable futuristic design strategies with reference to energy efficiency and resource conservation.

OR

IX. Evaluate Zero Energy and Energy-Plus buildings with case studies.

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B.Arch-VII(R/S)-11-25-4403 Reg. No. | | | | | | | | |

B

B.Arch. Degree VII Semester Regular/Supplementary Examination November 2025

AR 1706 (d) ARCHITECTURAL CONSERVATION (ELECTIVE II)

(2021 Scheme)

Time: 3 Hours Maximum Marks: 100

PART A

(Answer **ALL** questions)

(8 × 5 = 40)

I. Write short notes on the following:

(a) John Ruskin
(b) Built Heritage
(c) Venice Charter
(d) ICOMOS
(e) Adaptive Reuse
(f) Biological Causes of Deterioration
(g) Consolidation
(h) Restoration vs. Reconstruction

PART B

(4 × 15 = 60)

II. Explain the concepts of Cultural, Natural and Built Heritage with suitable examples.

OR

III. Trace the historical development of the conservation movement globally.

IV. Explain the structure and responsibilities of the Archaeological Survey of India (ASI).

OR

V. Compare roles of ICCROM, ICOMOS and INTACH in heritage conservation.

VI. Discuss various causes of material deterioration in heritage buildings with examples.

OR

VII. Analyze the impact of natural disasters (earthquakes, floods, fire) on built heritage.

VIII. Explain the concept of "Seven Degrees of Intervention" in architectural conservation. Discuss each level in detail with suitable examples.

OR

IX. Describe the preparatory procedures for conservation, focusing on the identification of values (emotional, cultural, use) and initial inspections.

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