

Khulna University of Engineering & Technology

Department of Architecture

B. Arch 4th Year 2nd Term Regular Examination, 2022

Course No: Arch 4221

Course Title: Housing

Full Marks: 210

Time: 03 Hours

- N.B. i) Answer any three questions from each section in separate script
ii) Figures in the right margin indicate full marks



Section-A

1. a) What is the meaning of 'Housing' from the aspect of scale? "Home is a multivalent concept"- Describe in detail. 05+10=15
b) Briefly discuss the economic & social roles of Human Settlements. 20
2. a) Describe the reasons behind the emergence of 'Real Estate Industry' in Bangladesh. 15
b) What are the reasons behind the struggle of Real Estate Industry in Bangladesh? What role can the government play to alleviate the situation? 15+05=20
3. a) What are the levels of modernity- according to Hilde Heynen? 05
b) Write short notes on: 09x10=30
 - i. Floating Homelessness
 - ii. Situated Homelessness
 - iii. Potential Homelessness
4. a) Define 'Urbanization'. Why 'Urbanization' is happening rapidly in Bangladesh? 05+10=15
b) What are the indicators for the measurement of housing affordability? Describe in detail. 20

Section-B

5. a) What are the attributes of Sustainable Housing? 15
b) Discuss the different perceptions about 'Housing Problem' in your own words. 20
6. a) According to Johannes Kinder, discuss the history of resilience in two key disciplinary areas. 10
b) Discuss the key ideas we need to consider while focusing 'Affordability' in housing design. 25
7. a) Elaborate the conventional housing delivery systems in Bangladesh with proper examples. 15
b) Mention the flood resistance practices of our country. What measures do the local people of the coastal region of Khulna practice for resilience against the cyclone? 20
8. a) Briefly explain 'Community Resilience'. 10
b) Discuss the five forms of capital available in households with relevant examples. 25

Khulna University of Engineering & Technology

Department of Architecture

B. Arch 4th Year 2nd Term Regular Examination, 2022

Course No: Arch 4231 Course Title: Architecture of Bengal II

Full Marks: 210

Time: 03 Hours

- N.B i) Answer any three questions from each section in separate script
ii) Figures in the right margin indicate full marks



Section-A

1. Compare between architecture of 'Mughal' and British occupied 'Post-Mughal' phase with respect to the style, construction technology and building materials. 35
2. "Sultanate architecture developed a distinctive provincial style."- Justify the statement with evidences. 35
3. a) Describe the architectural features of "Khan Jahan Ali's Mausoleum" with illustrations. 20
b) Why did Mughal rulers avoid local features of the architecture of Bengal mosques? 15
4. a) Describe the unique architectural characteristics of "Eklakhi style" with neat sketches. 20
b) Compare the architectural styles of imperial Mughals with local Mughal architecture. 15

Section-B

5. a) How did climate shape up the style of colonial architecture of Bengal? 15
b) 'Bungalow has a prominent role in the architecture of the world.'- Explain with proper reasoning. 20
6. "Victoria Memorial is a wonderful example of great fusion between European and Mughal Architecture."- Explain this statement with sketches. 35
7. "Built with European influences, it was the "Way of Life" of 'High Class Bengalis' that influenced the unique architectural spatial organization of Zamindar houses."- Explain the statement using proper justification. 35
8. a) Compare any two types of residential developments which had adopted by British in Bengal. 20
b) Why colonial rulers avoided local architectural features in the first place? 15

Khulna University of Engineering & Technology

Department of Architecture

B. Arch 4th Year 2nd Term Regular Examination, 2022

Course No: Arch 4251 Course Title: Sustainable and Green Building

Full Marks: 210

Time: 03 Hours

- N.B i) Answer any three questions from each section in separate script
ii) Figures in the right margin indicate full marks

Section-A

1. a) Develop an assessment matrix to evaluate green buildings in the context of Bangladesh. 35
Note: The primary areas of classification and assessment outlined below must remain. Additional areas can be added based on your preferences.
i. Energy Efficiency
ii. Indoor Environment Quality
iii. Sustainable Site planning & Management
iv. Materials & Resources
v. Water Efficiency & Innovation
2. a) What is "Daylight Factor (DF)"? Explain the equation for calculating daylight factor. 07
b) Evaluate the concept of "Daylight Harvesting". 08
c) Which techniques and strategies will you consider to develop efficient daylighting in building design? 20
3. a) Demonstrate the theme of "Green Interior" with proper references. 10
b) Mention the requirements we should consider while selecting materials for interior design. 10
c) Generate a short list of eco-friendly interior materials for designing your classroom and explain your approach to a sustainable interior design. 15
4. a) What is 'Pressure Reducing Valve'? Mention the basic mechanism and use of a pressure reducing valve. 10
b) What is 'water efficiency'? Mention the factors which you will consider to design with water efficiency? 15
c) Explain the steps that need to be taken to achieve sustainable design. 10

Section-B

5. a) What types of measures do you have to go through, and why, to make your designed housing project in your studio as DGNB-certified residential project? Clarify using appropriate reasoning. 35
6. a) Define the term 'harmful' in the context of building materials. Produce a material life cycle diagram in order to illustrate the reduction of material waste. 5+10=15
b) Explain the importance of façade optimization in designing a green building using an example. 20

7. a) What are some of the traditional and innovative design strategies for energy efficient buildings in tropical climates like Bangladesh? How can the landscaping and vegetation around a house in Bangladesh enhance its energy efficiency and environmental quality? 15+20=35
8. a) In Bangladesh, what renewable energy sources can be combined with energy-efficient building design techniques to lessen reliance on fossil fuels? -Explain. 35



Khulna University of Engineering & Technology

Department of Architecture

B. Arch 4th Year 2nd Term Regular Examination, 2022

Course No: Arch 4261

Course Title: Interior Design Theory

Full Marks: 210

Time: 03 Hours

- N.B. i) Answer any three questions from each section in separate script
ii) Figures in the right margin indicate full marks



Section-A

1. a) Briefly discuss the physical systems of a building. 20
b) What do you understand by 'Spatial Transition'? Explain in brief. 15
2. a) How square spaces can be used and modified in determining spatial dimensions of interior space? Explain. 20
b) Briefly explain the vertical dimension of interior space. 15
3. a) What is sustainable design? Mention some sustainable design strategies for building interiors. 10+10=20
b) In what ways should interior spaces fit for human movement, activity, and repose? Explain. 15
4. a) Briefly discuss the color dimensions. Explain, how the apparent value of a color can be altered by the amount of illumination. 10+05=15
b) What do you understand by 'Rhythm'? How visual and spatial rhythm can be introduced in an interior space? 20

Section-B

5. a) What are the basic requirements for natural ventilation in building interiors? Outline the functions of an air conditioning system. 5+10=15
b) Illustrate the equipment arrangement for a typical central HVAC system. 20
6. a) Elaborate on some day lighting principles for interior design. 25
b) What do you understand by brightness constancy and color constancy? Explain. 05+05=10
7. a) What is acoustics? How is acoustics related to interior design? 05+05=10
b) Define the following terms: 05X05=25
 - I. Echoes
 - II. Reverberation
 - III. Acoustic Resonance
 - IV. Decibel
 - V. Noise
8. a) What do you understand by paint sheers and stains? Mention their types and applications. 10+10=20
b) Outline the composition of plaster. Explain the layers of a three-coat plaster finish. 5+10=15

Khulna University of Engineering & Technology

Department of Architecture

B. Arch 5th Year 2nd Term Regular Examination, 2022

Course No: Arch 5253

Course Title: Rural Architecture & Planning

Full Marks: 210

Time: 03 Hours

- N.B i) Answer any three questions from each section in separate script
ii) Figures in the right margin indicate full marks



Section-A

1. a) Explain the five major metaphors of rurality. 15
b) "Rural housing as a process of product and rural living."- Explain this statement with your understandings. 20
2. a) Mention some recommendations you would like to address to enhance the current rural development strategy of Bangladesh. 15
b) Describe the steps involved in building community resilience in the 'Char' areas of Bangladesh. 20
3. a) Analyze the three dimensions of Rural Architecture in Bangladeshi courtyard houses with proper references. 15
b) Evaluate the impact of environmental, technological and cultural factors on the formation of rural houses in Bangladesh. 20
4. a) Briefly discuss the steps involved in 'Construction with large earth block' with proper references and sketches. 10
b) "Physical, functional and cultural aspects of courtyard varies with different occupation based homestead."- Elaborate this statement with evidences. 25

Section-B

5. a) What is 'Architecture' according to Severiano Porto? Describe the architect's bioclimatic strategies used in his own residence. 5+15
=20
b) Discuss the comfort indicators of traditional Thai houses in the regional climate situation. 15
6. a) Illustrate with detail discussion about Turkish courtyard 'Eyvan'. 20
b) What are the climate characteristics of urban settlements in South-East Turkey? 15
7. a) Illustrate an Englishman's bungalow in the 1900s with proper details. Also discuss various climatic considerations taken in the design. 15+10
=25
b) Write down the limitations of the designed Englishman's Bungalow. 10
8. a) Discuss the four elements of Santorini's Rural Architecture and it's relation with its architectural features. 20
b) What are the new addition and future development plans needed to save the struggling public baths of Damascus and Fez? Explain. 15

Khulna University of Engineering & Technology

Department of Architecture

B. Arch 5th Year 2nd Term Regular Examination, 2022

Course No: Arch 5243

Course Title: Professional Practice & Ethics

Full Marks: 210

Time: 03 Hours

- N.B i) Answer any three questions from each section in separate script
ii) Figures in the right margin indicate full marks



Section-A

1. a) Briefly discuss the historical background defining 'Architect as Profession'. 12
- b) Why registration of an architect is required? Explain briefly. 12
- c) Write the characteristics of the architecture profession. 11
2. a) Justify the importance of the Intern Development Program (IDP) for professional carrier development. 15
- b) What is Bill of Quantities (BOQ)? 05
- c) What is tender? Write down the different types of tender. 15
3. a) What is 'Leadership skills'? 06
- b) Write down the procedure that a graduate follows before applying for the first job-illustrate briefly. 14
- c) Delineate different sectors beyond the traditional practice in architecture. 15
4. a) Discuss the challenges of Real Estate section in the context of Bangladesh. 12
- b) How could a Real Estate company plays the role as community builder? Discuss with example. 15
- c) Define 'Restricted Tender Method' with suitable example. 08

Section-B

5. a) Why professional membership is vital for any field of professional practice? Discuss in the light of IAB membership. 15
- b) How does the CPD training help professional architect? Explain in brief. 12
- c) Write down the objectives and activities of IAB. 08
6. a) What is 'Request for Proposal (REP)? Discuss the different parts of RFP in details. 15
- b) Explain the principle eight of IAB's code of professional ethics: Obligation to society and environment with examples. 12
- c) What is Open Tender Method (OTM)? 08
7. a) Briefly explain the list of deliverables given by an architect during his different consultancy phases. Discuss perspective of IAB. 15
- b) What is Expression of Interest (EOI)? Elaborate different parts of an EOI prepared for a government project-as example. 20
8. a) What do you mean by 'Professional Ethics'? Why knowledge of professional ethics is important for an architect? Discuss in the light of your understanding. 20
- b) What are the different selection procedures of architects? 10
- c) Note down the objectives of 'ArcAsia'. 05