L-1/T-2/ARCH **Date : 29/06/2015**

BANGLADESH UNIVERSITY OF ENGINEERING AND TECHNOLOGY, DHAKA

L-1/T-2 B. Arch. Examinations 2013-2014

Sub : **ARCH 163** (Building & Finish Material)

Full Marks: 140 Time : 3 Hours

USE SEPARATE SCRIPTS FOR EACH SECTION

The figures in the margin indicate full marks.

SECTION – A

There are **FOUR** questions in this section. Answer Q. No. 1 and any **TWO** from the rest.

1. (a) What are the required characteristics of Good Building Stones? **(5)**

   (b) Elaborate the properties of building stones in relation to their structural requirements. **(15)**

2. (a) Discuss the 'Four' basic constituents of Brick Clay. Elaborate various physical and chemical functions of Brick Clay and their desirable condition to produce good quality bricks. **(5+10=15)**

   (b) Discuss the harmful constituents of Brick Clay. **(10)**

3. (a) Define Portland Cement. Discuss the basic constituents of Portland Cement the functions of cement ingredients. **(10)**

   (b) Explain the properties of concrete in terms of its 'Strength', Durability and Workability. **(10)**

   (c) Mention the factors that affect the properties of concrete. **(5)**

4. Write short notes on the following (any Five): **(5×5=25)**

   (a) Steps in Brick Manufacturing process.

   (b) Colodial state of clay particles.

   (c) Use of Building Stone.

   (d) Composition of Portland Cement.

   (e) Characteristics of Good Brick.

   (f) Sandstone.

Contd P/2

ARCH 163/ARCH

SECTION – B

There are **FOUR** questions in this section. Answer **Q. No. 5** and any **TWO** from the rest.

5. (a) Explain with sketches the 'Float Process' of Glass Manufacturing. **(10)**

   (b) Define Glass and its constituent elements. **(5)**

   (c) Briefly discuss the Architecturally important properties of Glass. **(5)**

6. (a) Describe with sketches the application process of two common types of floor finishes used in buildings in Bangladesh. **(15)**

   (b) Explain the following characteristics of 'Clay Tiles'— **(10)**

   (i) Vitrification

   (ii) Composition of the tile body

   (iii) Surface finish

   (iv) Process of Manufacture.

7. (a) Define paint and explain it's constituents in brief. Name three different methods of paint 'evaporation'. **(5)**

   (b) Explain the following characteristics of paint: **(5)**

   (i) Hiding power

   (ii) Particles shape and size of pigments.

   (c) Explain the Decorative and Protective purposes of the following types of paints. **(15)**

   (i) Pigmented Paint

   (ii) Clear Coating

   (iii) Bituminous Coating

   (iv) Rust Preventive Coating.

8. Write short notes on the following (Any Five): **(5×5=25)**

   (a) Fourcault Process of Glass Manufacturing

   (b) Cement Morter Coating of Paint

   (c) Homogeneous Tiles

   (d) Vehicle of Paint

   (e) Heat Absorbing Glass

   (f) Use of Paint as a finish material.

L-1/T-2/ARCH **Date : 06/07/2015**

BANGLADESH UNIVERSITY OF ENGINEERING AND TECHNOLOGY, DHAKA

L-1/T-2 B. Arch. Examinations 2013-2014

Sub : **ARCH 143** (Art and Architecture II)

Full Marks: 140 Time : 3 Hours

USE SEPARATE SCRIPTS FOR EACH SECTION

The figures in the margin indicate full marks.

SECTION – A

There are **FIVE** questions in this section. Answer Q. No. 1 and any **THREE** from the rest.

1. Write short notes on any THREE of the followings: **(3×8 ⅓ =25)**
   (a) Byzantine Dome.
   (b) Gothic Structural System.
   (c) Romanesque ribbed vault.
   (d) Climatic influence on Gothic architecture.

2. Describe the different parts of an Early Christian Basilican Church with relevant sketches. **(15)**

3. Explain the architectural characteristics of Byzantine Architecture with necessary sketches and examples. **(15)**

4. Establish the characteristics of 'English Gothic' architecture with reference to Salisbury Cathedral and compare it with French Gothic style. **(15)**

5. Discuss the internal spaces of Early Christian, Romanesque, Byzantine and Gothic Churches with relevant sketches. **(15)**

SECTION – B

There are **FIVE** questions in this section. Answer Q. No. 6 and any **THREE** from the rest.

6. Write short notes on any THREE of the followings: **(3×8 ⅓ =25)**
   (a) Giant order
   (b) Hoop-tie principle
   (c) Palladian Motif
   (d) 'Purist' and 'Mannerist'

Contd P/2

ARCH 143/ARCH

7. What was the reason of the break in the continuous architectural development in Renaissance Period? How did the outcome of Renaissance thought influence Architecture? **(15)**

8. (a) State the Architectural Characteristics of High Renaissance period with proper examples and sketches. **(10)**

   (b) Name at least one work of the following Architects in Renaissance Period: **(5)**

   (i) Palladio (ii) Bramante (iii) Brumelleschi (iv) Michebzzo Michelozzi (v) Michelangelo

9. Discuss St. Peter's Church of High Renaissance period to explain the styles of Michelangelo's work. **(15)**

10. (a) Discuss the different phases of Renaissance painting with proper examples. **(10)**

    (b) Name at least one work of the following painter/sculptor: **(5)**

    (i) Leonardo da Vinci (ii) Michelangelo (iii) Masaccio (iv) Fra Angelico (v) Botticelli.

L-1/T-2/ARCH **Date : 01/08/2015**

BANGLADESH UNIVERSITY OF ENGINEERING AND TECHNOLOGY, DHAKA

L-1/T-2 B. Arch. Examinations 2013-2014

Sub : **ARCH 133** (Climate and Design)

Full Marks: 140 Time : 3 Hours

USE SEPARATE SCRIPTS FOR EACH SECTION

The figures in the margin indicate full marks.

SECTION – A

There are **FOUR** questions in this section. Answer Q. No. 4 and any **TWO** from the rest.

1. (a) How does earth-sun relationship affect the amount of solar radiation received at a particular point on earth surface— explain with diagram. **(10)**

   (b) Illustrate distribution of incoming radiation and release of heat by earth surface. **(10)**

2. Explain the four climate variables affect the heat dissipation process of human body for various indoor conditions. **(20)**

3. Explain with diagram a buildings heat exchange process with the outdoor environment. Elaborate any two factors in this relation. **(20)**

4. Write short notes on (any five) **(30)**

   (a) Urban heat island (b) Bio-climatic chart (c) Transmittance (d) Sol-air temperature (e) Temperature inversion (f) Surface conductance (g) Effective temperature.

SECTION – B

There are **FOUR** questions in this section. Answer Q. No. 5 and any **TWO** from the rest.

5. Write short notes on any two from the following: **(2×10=20)**

   (a) Periodic Heat Flow

   (b) Degree of Control

   (c) Cross Ventilation

6. Discuss in detail basic types of shading devices used on buildings. Comment on the advantages of using horizontal shading devices on south facades of building in Dhaka. **(25)**

7. What are the functions of ventilation? Illustrate with annotated sketches how opening an be controlled to influence airflow pattern indoors. **(25)**

8. What are the physiological objectives for shelter design in hot-dry climate? Discuss in detail 'roof and wall surfaces' in relation to buildings in hot-dry climate. **(25)**

L-1/T-2/ARCH **Date : 05/08/2015**

BANGLADESH UNIVERSITY OF ENGINEERING AND TECHNOLOGY, DHAKA

L-1/T-2 B. Arch. Examinations 2013-2014

Sub : **ARCH 147** (Art Appreciation)

Full Marks: 140 Time : 3 Hours

USE SEPARATE SCRIPTS FOR EACH SECTION

The figures in the margin indicate full marks.

SECTION – A

There are **FIVE** questions in this section. Answer **Q. No. 1** and any **THREE** from the rest.

1. Mention the classification of Visual Art with example. **(25)**

2. All art begins with craft. If a work is not well made, there is little chance that it will be experienced as art. What are the traditional material use in craft media of Art, Discuss. **(15)**

3. Define sculpture and discuss the traditional means of making sculpture. **(15)**

4. (a) Differentiate among representational, non-representational and abstract art. Illustrate with appropriate examples. **(9)**

   (b) Describe the relationships between 'form' and 'context'. **(6)**

5. Describe different types of drawing media. Write short notes on the following paining medias. **(6+9=15)**

   (i) Gouache

   (ii) Tempera

   (iii) Fresco.

SECTION – B

There are **FIVE** questions in this section. Answer **Q. No. 10** and any **THREE** from the rest.

6. What are the main characteristics of Baroque period? Illustrate based on the paintings of Caravaggio. **(15)**

7. What do you understand by the movement 'Romanticism'? What were the inspirations behind this movement? Describe the main features of Romantic Landscape painting with example. **(15)**

Contd P/2

ARCH 147

8. How invention of photography influenced the works of 19th century painters? Why many believed photography was the source and sponsor of this disaster called 'Realism'? Describe with reference of Gustave Courbet's work. **(15)**

9. What are the main features of 'Impressionism'? Whose work best exemplify the formalistic pest-impressionist attitude? Elaborate with example. **(15)**

10. Write short notes on the following (Any five): **(5×5=25)**
    (a) Van Gogh
    (b) German Expressionism
    (c) Synthetic and Analytical Cubism
    (d) Piet Mondrian
    (e) Characteristics of Eastern Art
    (f) Dada movement.

L-1/T-2/ARCH **Date : 05/08/2015**

BANGLADESH UNIVERSITY OF ENGINEERING AND TECHNOLOGY, DHAKA

L-1/T-2 B. Arch. Examinations 2013-2014

Sub : **ARCH 177** (Music Appreciation)

Full Marks: 140 Time : 3 Hours

USE SEPARATE SCRIPTS FOR EACH SECTION

The figures in the margin indicate full marks.

SECTION – A

There are **FOUR** questions in this section. Answer **Q. No. 1** and any **TWO** from the rest.

1. (a) Explain the concept of Architecture as 'frozen music'. **(10)**

   (b) Elaborate on the qualities of musical sounds as opposed to noise. **(10)**

   (c) Discuss the concept of abstraction in art and why music can be considered as 'art'. **(10)**

2. (a) Discuss the two basic ingredients of music. **(10)**

   (b) Write in brief about the main theories on the origin of music. **(10)**

3. Elaborate on the Evolution of Bengali Music — beginning from the 10th Century to the introduction of the humanist trend in the Nineteenth Century. **(20)**

4. Write short notes on: **(2×10=20)**

   (a) Beethoven

   (b) Patriotic Bengali Music

SECTION – B

There are **FOUR** questions in this section. Answer **Q. No. 5** and any **TWO** from the rest.

5. (a) Name the ten thaatas showing their notations. **(10)**

   (b) Discuss four main manifestations of North Indian Raaga music: Dhrupad, Kheyal, Tappa and Thumree. **(20)**

6. (a) Differentiate between Urban art music and folk music. **(10)**

   (b) Elaborate on Bhawaiya and Kirtan. **(10)**

7. Explain the various influences that shaped the musical composition of Kazi Nazrul Islam. **(20)**

8. Discus the musical works of Rabindranath Tagore in details. **(20)**

L-1/T-2/ARCH **Date : 05/08/2015**

BANGLADESH UNIVERSITY OF ENGINEERING AND TECHNOLOGY, DHAKA

L-1/T-2 B. Arch. Examinations 2013-2014

Sub : **ARCH 703** (Art Appreciation)

Full Marks: 140 Time : 3 Hours

USE SEPARATE SCRIPTS FOR EACH SECTION

The figures in the margin indicate full marks.

SECTION – A

There are **FIVE** questions in this section. Answer **Q. No. 1** and any **THREE** from the rest.

1. (a) What do you understand by 'Art'? What are the functions of Art? Describe necessity or relevance of the course 'Art Appreciation' for the students of Architecture. **(15)**

   (b) Write short notes on **(4+3+3=10)**

   (i) Perception and Awareness

   (ii) Creativity

   (iii) Evaluating Art.

2. Elaborate various printing techniques with example. **(15)**

3. What are the different methods of making sculpture? Describe the method of casting. **(8+7=15)**

4. (a) Explain with example, what do you understand by craft. **(6)**

   (b) Write short notes on the followings: **(9)**

   (i) Industrial Design.

   (ii) Graphic Design.

   (iii) Textile Design.

5. What are the methods of printmaking? Give a short description on Intaglio process of printmaking. **(6+9=15)**

SECTION – B

There are **FIVE** questions in this section. Answer **Q. No. 10** and any **THREE** from the rest.

6. What are the main differences between realism and Impressionism? Compare these two movements based on the works of two respective artists. **(15)**

7. Illustrate the main features of 'Baroque' period based on the works of Bernini. **(15)**

Contd P/2

ARCH 703

8. What do you understand by post-impressionism? Elaborate with example the works of the artists whose works best exemplify the expressionistic post-impressionist attitude. **(15)**

9. (a) What are the main features of the 'Romanticism Movement"? Who inspired it? **(15)**
   (b) Differentiate between Eastern and Western Art.

10. Write short notes on the followings (Any five) **(5×5=25)**
    (i) Georges Seurat
    (ii) Abstract Expressionism
    (iii) Cubism
    (iv) Surrealism
    (v) Pop Art
    (vi) De Stijl

L-1/T-2/ARCH **Date : 05/08/2015**

BANGLADESH UNIVERSITY OF ENGINEERING AND TECHNOLOGY, DHAKA

L-1/T-2 B. Arch. Examinations 2013-2014

Sub : **ARCH 707** (Music Appreciation)

Full Marks: 140 Time : 3 Hours

USE SEPARATE SCRIPTS FOR EACH SECTION

The figures in the margin indicate full marks.

SECTION – A

There are **FOUR** questions in this section. Answer **Q. No. 1** and any **TWO** from the rest.

1. (a) Explain the concept of Architecture as 'frozen music'. **(10)**

   (b) Elaborate on the qualities of musical sounds as opposed to noise. **(10)**

   (c) Discuss the concept of abstraction in art, and why music can be considered as 'art'. **(10)**

2. (a) Discuss the two basic ingredients of music. **(10)**

   (b) Write in brief, the main theories on the origin of music. **(10)**

3. Elaborate on the Evolution of Bengali Music — beginning from the 10th Century to the introduction of the humanist trend in the Nineteenth Century. **(20)**

4. Write short notes on: **(2×10=20)**

   (a) Beethoven

   (b) Patriotic Bengali Music

SECTION – B

There are **FOUR** questions in this section. Answer **Q. No. 5** and any **TWO** from the rest.

5. (a) Name the ten Thaatas showing their Notations. **(10)**

   (b) Discuss four main manifestations of North Indian Raga music, Dhrupad Kheyal Tappa and Thumree. **(20)**

6. (a) Differentiate between Urban art music and folk music. **(10)**

   (b) Elaborate on Bhawaiya and Kirtan. **(10)**

7. Explain the various influences that shaped the Musical composition of Kazi Nazrul Islam. **(20)**

8. Discuss the musical works of Rabindranath Tagore in details. **(20)**

L-1/T-2/ARCH **Date : 09/08/2015**

BANGLADESH UNIVERSITY OF ENGINEERING AND TECHNOLOGY, DHAKA

L-1/T-2 B. Arch. Examinations 2013-2014

Sub : **ARCH 173** (Society and Architecture of Bengal)

Full Marks: 140 Time : 3 Hours

USE SEPARATE SCRIPTS FOR EACH SECTION

The figures in the margin indicate full marks.

SECTION – A

There are **FIVE** questions in this section. Answer **Q. No. 1** and any **THREE** from the rest.

1. (a) Describe the following ancient Janapadas/cities identifying their: **(12)**
   - (i) Historical importance
   - (ii) Geographical location on a map
   - (iii) Sources of reference (at least one for each)

     A. Pundranagar B. Gaur C. Samactata

     D. Harikel E. Karnashubarna F. Somapura

   (b) Mention the names of the publications made by the following scholars of Gupta, Pala and Sena regime in their respective areas: **(7)**
   - (i) Kalidash
   - (ii) Jeemutibahan
   - (iii) Chakrapani
   - (iv) Barahmihir
   - (v) Sridharbhattya

2. Describe the sequential development of Vedic hut with sketches. Mention the use of materials in relation to the changes of its forms. Explain how the Vedic cities were planned at the beginning. **(17)**

3. Discuss the underlying assumptions in relation to the following elements of Paharpur Vihara Complex: **(17)**
   - (i) the arrangement of mandapas, ante chambers and pradakshina paths
   - (ii) the thickness of peripheral walls
   - (iii) brick altars within the chambers and use of stone blocks

4. Various constructional stages were identified in the central temple of Shalban Vihara, explain what was the conceptual difference in the functional layout of the floor plans made in different periods. **(17)**

5. Illustrate and describe the city of Pundranagar showing location of a few important remains within its boundary. Describe the stages of plans of Govinda Vita. **(17)**

Contd P/2

HUM 173/ARCH

SECTION – B

There are **FIVE** questions in this section. Answer **Q. No. 9** and any **THREE** from the rest.

6. (a) Show the essential features of an Indian mosque. (use sketches) **(9)**

   (b) What are the basic differences between a Pre-Mughal Bengal and a Mughal mosque? **(3 ½)**

   (c) Explain the structural system with column, beam, arch and dome executed in Bengal mosque. **(3 ½)**

7. Illustrate and describe the Adina Masjid and critically examine the following features: **(16)**

   (i) Entrance and Axis

   (ii) Scale and Proportion

   (iii) Probable elements and features influencing the later mosque architecture.

8. Describe the planning and layout of Ruplal house and explain how this can be considered as an example for the development of colonial culture reflecting in it architecture. (use sketches). **(16)**

9. Identify the visible anomalies present in the spatial layout and facade treatment of the following mansions of Old Dhaka. **(7 ⅓ ×3=22)**

   (i) Rebuti Mohan Das

   (ii) Rose Garden

   (iii) Shakti Oushadhalay of Mathur Babu.

10. Describe the development of textile sector in and around Dhaka during the Post-Pallasey Bengal. Mention three kind of production system in industrial production in this period. Explain how the native elite group "The Zamidars" played an important role in the socio-economic sphere of Bengal at that time. **(16)**