

BANGLADESH UNIVERSITY OF ENGINEERING AND TECHNOLOGY, DHAKA

L-1/T-2 B. ARCH Examinations 2012-2013

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

Full Marks : 140

Time : 3 Hours

The figures in the margin indicate full marks.

USE SEPARATE SCRIPTS FOR EACH SECTION

SECTION – A

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

1. (a) Briefly discuss the geological classification of building stones. (10)
(b) Write short notes on- (10)
 - (i) Granite
 - (ii) Sandstone

2. (a) What are the harmful constituents generally found in Brick clays? (10)
(b) Briefly describe the characteristics of good bricks. (15)

3. (a) What is Portland cement? Write down the composition of Portland cement. (5)
(b) Briefly discuss the properties of concrete. (20)

4. (a) Draw the cross section of an exogenous tree and show its different parts. (5)
(b) Briefly discuss the different methods of seasoning timber. (15)
(c) Write down the advantages of steel construction. (5)

SECTION – B

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

5. Explain with sketches the following Floor and Wall Finish materials in view of their application process. (10+10=20)
 - (a) Artificial patent stone
 - (b) Terrazzo or Mosaic Floor Finish

6. (a) Define Paint and Describe its Constituent parts. (5)
(b) How paint is used for Protective purpose? Explain with different types of paint. (10)
(c) Explain how paint pigment affects paints characteristics? (10)

7. (a) Explain "Fourcault Process" of glass manufacturing. (10)

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Contd ... Q. No. 7

(b) Describe the following glasses with their application and use in buildings: **(5×2=10)**

- (i) Glass block
- (ii) Glare reducing glass
- (iii) Plate glass
- (iv) Reflective mirror glass
- (v) Foamed glass

(c) Define glass Fibre and its use for various purpose. **(5)**

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

- (a) Celluler glass
 - (b) Degree of vitrification
 - (c) Hiding Power of Paint
 - (d) Float process of glass manufacturing.
 - (e) Homogeneous clay tiles.
 - (f) Rust Preventive Paint.
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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 (03) of the following: **(3×8 1/3=25)**
 - (a) Influence of climate on Romanesque architecture.
 - (b) "Flying Buttress" and Pinnacle"
 - (c) Rose window
 - (d) The campanile, Pisa.

2. Draw a plan, a longitudinal section and a transverse section of an early Christian "Basilican Church" and identify different parts of it. **(15)**

3. Briefly describe the characteristics of St. Sophia, Constantinople (532-37) as a prime example of Byzantine architecture. **(15)**

4. Compare the architectural characteristics of 'French Gothic' and 'English Gothic' architecture. **(15)**

5. Illustrate and describe different types of 'vaults' used in English Gothic period. **(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 following: **(3×8 1/3=25)**
 - (a) 'Humanism' in Renaissance Period.
 - (b) 'Purist' and 'Mannerist'.
 - (c) 'Orders' in Renaissance Period.
 - (d) 'Domes' in Renaissance Period.

7. (a) State the architectural characteristics of 'Early Renaissance Period' with necessary examples and sketches. **(10)**
 - (b) Name at least one work of the following Architects in Renaissance Period. **(5)**
 - (i) Michelozzo Michelozzi (ii) Brunelleschi (iii) Palladio (iv) Michelangelo (v) Bramante.

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8. (a) Discuss Leonardo's contribution in creating depth in High Renaissance Painting. **(10)**
- (b) Name at least one work of the following painter/sculptor. **(5)**
- (i) Fra Fillippo Lippi.
 - (ii) Sandro Botticelli.
 - (iii) Masaccio.
 - (iv) Mantegna.
 - (v) Raphael.
9. Briefly narrate Michelangelo's architecture, painting and sculpture to establish his own style. **(15)**
10. Narrate briefly the different phases of Renaissance Painting with its characteristics. **(15)**
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L-1/T-2/ARCH

Date : 21/05/2014

BANGLADESH UNIVERSITY OF ENGINEERING AND TECHNOLOGY, DHAKA

L-1/T-2 B. Arch Examinations 2012-2013

Sub : ARCH 147 (Art Appreciation)

Full Marks : 140

Time : 3 Hours

The figures in the margin indicate full marks.

USE SEPARATE SCRIPTS FOR EACH SECTION

SECTION – A

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

1. What is 'New Media Art'? Write short history of New Media Art. Write brief description with example on any two of the followings. **(13+6+6=25)**
 - (a) Interactive Art
 - (b) Environmental Art
 - (c) Parametric / Generative Art.
2. Discuss the functions and types of drawing? **(15)**
3. What are the relationship between art and architecture? **(15)**
4. What is Design? Write short note on Industrial Design, Textile Design, and Clothing Design. **(15)**
5. 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)**

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 Five of the followings: **(25)**
 - (a) Gian Lorenzo Bernini,
 - (b) Neoclassicism
 - (c) Pointilism,
 - (d) Walsily kandinsky,
 - (e) De Stijl,
 - (f) Surrealism.
7. Compare 'Realism' and 'Impressionism' based on the works of any two respective artists. **(15)**
8. What are the differences between the eastern and the western art? **(15)**

ARCH 147

9. "The two dominant tendencies during the period were expressionistic and formalistic" - what was that period? Write short notes on the works of four painters whose work best exemplify this period.

(15)

10. "We can call them the artists of the 2nd generation. The emergence and development of abstract painting happened in the hands of these artists who returned with higher education from other countries." - who are these artists? Write short notes on any two of them.

(15)

L-1/T-2/ARCH

Date : 28/05/2014

BANGLADESH UNIVERSITY OF ENGINEERING AND TECHNOLOGY, DHAKA

L-1/T-2 B. ARCH Examinations 2012-2013

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

Full Marks : 140

Time : 3 Hours

The figures in the margin indicate full marks.

USE SEPARATE SCRIPTS FOR EACH SECTION

SECTION – A

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

1. (a) Outline six janapadas and 4 cities of ancient Bengal and identify their present locations on a map with at least one source of reference for each. **(10)**
- (b) Briefly answer the following questions (any three): **(3×5=15)**
- (i) Why and at what point Alexander decided to halt further invasion within India?
- (ii) Where the ancient universities were located? Mention at least three of them in this region.
- (iii) What was the rudimentary form Hindu temple during the Gupta era?
- (iv) How the foundation of Pataliputra city was laid?
2. (a) Describe the underlying assumptions related to the following elements of Paharpur Vihara (use sketches): **(15)**
- (i) The central hollow shaft, mandapa and ante chamber
- (ii) Series of extra chambers at the peripheral wall
- (iii) The elongated gap at the eastern end of the northern arm.
3. Describe the contribution of Pala and Sena scholars in the field of Astrology, Science, Medicine and Mathematics, with references. Explain what you know about 'Charjapadas'. **(15)**
4. Draw the Master plan and describe the ancient city of Pundranagar. Explain the layout of Govinda vita at its various stages of development. What is the reason behind the incomplete excavation? **(15)**
5. How the basic concept of Nalanda Vihara was developed from the primary form of Buddhist Vihara? Explain with sketches. **(15)**

SECTION – B

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

6. (a) Describe the floor plan, architectural features of Choto Sona Masjid of Gaur. **(10)**
- (b) Explain how the loads of multiple domes were transferred to the structural members in Bengal mosques? Use sketches. **(7)**

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7. Illustrate and describe the Shaith Gumbad masjid at Bagerhat and compare the specific features expressed in the Tugluq style of Delhi. (17)
8. Describe the Curzon Hall in terms of its planning and layout. Explain with sketches and references: (12+5)
- (i) how this building has incorporated Mughal features and details.
 - (ii) the indigenous features of the style it reveals.
9. "Besides the ruling community, the native elite group 'the Zamidars' were found to be responsible in developing a colonial culture and subsequently for the development of its architecture" - Explain the statement with appropriate examples with sketches. (17)
10. Write short notes on (any three of the following) (19)
- (i) Phases of Islamic building art of Bengal.
 - (ii) State trade and commerce imbalance with the development of textile sector during Post-Pallasey Bengal.
 - (iii) Decorative elements of front façade of Rose Garden.
 - (iv) The controversy regarding 'Black hole tragedy' identified by the historians.
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L-1/T-2/ARCH

Date : 21/05/2014

BANGLADESH UNIVERSITY OF ENGINEERING AND TECHNOLOGY, DHAKA

L-1/T-2 B. Arch Examinations 2012-2013

Sub : ARCH 177 (Music Appreciation)

Full Marks : 140

Time : 3 Hours

The figures in the margin indicate full marks.

USE SEPARATE SCRIPTS FOR EACH SECTION

SECTION - A

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

1. Write notes on: **(10×3=30)**
 - (a) Properties of Musical Sound
 - (b) Harmony
 - (c) Thumri

2. Architecture and Music are strongly related - Explain the relationships and similarities. **(20)**

3. (a) Discuss the main foundations of the 'Thaata' system, mentioning the scales. **(10)**
(b) Explain the main characteristics of 'Raaga', and how they are sung. **(10)**

4. (a) Expound on the key influences in 19th Century Bengal on the urban art music of the time. **(15)**
(b) What are the main differences between the Western and North Indian classical Music systems? **(5)**

SECTION - B

There are **FOUR** questions in this Section. Answer Q. No. 8 and any **TWO** from the rest.

5. (a) Discuss the main sections of an orchestra. **(10)**
(b) Explain the basic differences of the sonata, concert and symphony. **(10)**

6. (a) Musical Compositions of Kazi Nazrul Islam are extremely diverse - explain in detail with reference to his life experiences. **(20)**

7. The life and musical works of Rabindranath Tagore are interconnected - explain in detail with references. **(20)**

8. Write short note on: **(3×10=30)**
 - (a) Ram Nidhi Gupta.
 - (b) Rajanikanta sen.
 - (c) Beethoven

SECTION – A

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

1. What are the factors for thermal comfort? Explain body heat exchange process along with the concept of thermal balance. (20)
2. What is the meaning of comfort Indices? Name few Indices. Elaborate the concept of CET with diagram. (20)
3. How local factors/site factors affect the factors of climate of a zone? Narrate with diagrams. (20)
4. Write short notes on (any five): (30)
(a) Solar heat gain factor (b) Periodic heat flow (c) thermal diffusivity (d) Urban heat island (e) Conductance and transmittance (f) Psychometric chart

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 of the following: (10×2=20)
(a) Roof and Wall design in Warm-humid climate
(b) Cross Ventilation
(c) 'Degree of Control'
 6. Discuss functions of ventilation with respect to buildings. (25)
 7. Discuss external spaces in hot-dry climate with annotated sketches. (25)
 8. Discuss prospect and problems of 'Cooling by ventilation' in your city. (25)
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