L-1/T-2/ARCH **Date : 18/02/2018**

BANGLADESH UNIVERSITY OF ENGINEERING AND TECHNOLOGY, DHAKA

L-1/T-2 B. Arch. Examinations 2016-2017

Sub : **ARCH 155** (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 question No. 1 and any **TWO** from the rest.

1. Write short notes on any TWO of the following: **(10×2=20)**

   (a) Composite climate

   (b) Driving rain

   (c) Effective temperature

2. (a) Discuss the process of heat production and heat loss of human body. **(15)**

   (b) How the thermal balance of a body is maintained? **(10)**

3. (a) Elaborate different elements of climate and their relationships. **(20)**

   (b) Discuss the pattern of precipitation on hills and over towns. **(5)**

4. Differentiate between the climatic features of warm-humid and hot-dry desert climate. **(25)**

SECTION – B

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

5. Write short notes on any TWO of the followings: **(10×2=20)**

   (a) Stack effect

   (b) Cavity wall

   (c) Multilayer body

6. (a) Critically explain periodic heat flow. **(7)**

   (b) Evaluate the process to maintain thermal balance of a building. **(18)**

Contd P/2

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7. (a) Analyze shadow angles with respect to local climate. **(7)**

(b) Prescribe different types of shading devices with illustrations considering functionality. **(18)**

8. Interpret the air flow mechanism through and around buildings with respect to the condition of Dhaka. **(25)**

L-1/T-2/ARCH **Date : 24/02/2018**

BANGLADESH UNIVERSITY OF ENGINEERING AND TECHNOLOGY, DHAKA

L-1/T-2 B. Arch. Examinations 2016-2017

Sub : **ARCH 165** (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) Name and describe the characteristics and application of different types of Paint Commercially available in Bangladesh. **(20)**

2. Explain with sketches the application process of Terrazzo floor and wall finish commonly used in Bangladesh. **(25)**

3. (a) What are the architecturally important properties of glass? **(5)**

   (b) Explain with proportion the constituents of glass. **(5)**

   (c) Fourcault Process of glass manufacturing. **(10)**

   (d) Available commercial forms of glass. **(5)**

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

   (a) Degree of Vitrification

   (b) Paint Pigment and Vehicle

   (c) Glass Fibre

   (d) Extender pigments of Paint

   (e) Rust Preventive Coating

   (f) Clean Coating of Paint

SECTION – B

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

5. (a) Explain the properties of 'Stone' as a building Construction material. **(20)**

6. What are the common harmful Constituents of Brick clay? How do they effect the quality of Brick? **(25)**

Contd P/2

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7. (a) How do plasticity and Binding quality in Brick clay imparts strength to good quality Brick for construction? **(15)**

   (b) Explain "Colodial state of particles" in Brick clay. **(10)**

8. Write notes on the following (Any Two) **(12 ½ ×2=25)**

   (a) Granite

   (b) Constituent parts of Portland Cement

   (c) Functions of Cement ingredients

L-1/T-2/ARCH **Date : 12/03/2018**

BANGLADESH UNIVERSITY OF ENGINEERING AND TECHNOLOGY, DHAKA

L-1/T-2 B. Arch. Examinations 2016-2017

Sub : **ARCH 605** (Building Technologies)

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. Write short notes on (Any Four) of the followings: **(5×4=20)**

   (a) Cylindrical shells.

   (b) Conoids.

   (c) Free Forms.

   (d) Buckminser Fuller dome.

   (e) Prof. Bauersfeld.

2. (a) How does folded plate work? Discuss with a neat sketch. **(15)**

   (b) What are the variations of folded plate? **(5)**

   (c) How folded plate reduces cost of construction? **(5)**

3. (a) What are Shells? What are the types of Shells? **(15)**

   (b) How shells work? Discuss with neat sketch of paper model. **(10)**

4. (a) What do you understand by 'Truss' and 'Space frames'? What are the similarities and differences among those? **(15)**

   (b) How we can connect the members of a Space Frame? Discuss with the name and sketches. **(10)**

Contd P/2

ARCH 605

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 Four): **(5×4=20)**

   (a) Building Component

   (b) Zone in "Modular Co-Ordination"

   (c) Rammed Earth Construction System

   (d) Pre-Fabrication

   (c) Cement Earth Block (CEB)

6. (a) What is Stone Masonry? Discuss the types of Stone Masonry? **(5+10=15)**

   (b) What is Stone? How it is evolved in nature? **(5+5=10)**

7. (a) What are the similarities and differencs of plastic and rubber? These are necessary and problems as well-why? **(5+10)**

   (b) What measures should be taken to deduce the problems regarding plastic and rubber. **(10)**

8. (a) What is Metal. Write the properties of metal. **(5+10=15)**

   (b) Why reconstructed wood is widely used now a days? **(10)**

L-1/T-2/ARCH **Date : 12/03/2018**

BANGLADESH UNIVERSITY OF ENGINEERING AND TECHNOLOGY, DHAKA

L-1/T-2 B. Arch. Examinations 2016-2017

Sub : **HUM 701** (Principles of Economics)

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 any **THREE**.

1. (a) What do you know about the fundamental economic problems and how are these problems addressed in a mixed economic systems? Explain. **(13 ⅓)**

   (b) Clarify the concept of utility in Economics. Explain the law of diminishing marginal utility with numerical as well as graphical presentations. **(10)**

2. (a) State the preconditions for an effective demand in Economics . Describe the common factors that affect the demand for a commodity. **(13 ⅓)**

   (b) The demand and supply functions of a commodity (say, X) are given respectively. **(10)**

   $Q_{dx} = 1120 - 35\,Px$

   and

   $Q_{sx} = 550 + 9P_x$

   Where, P_x is the price of the commodity. Find the equilibrium price and quantity of the commodity X. If the Government imposes 16% VAT on unit price, what would be the new equilibrium price and quantity?

3. (a) What is elasticity of demand? Describe different types of elasticity of demand and their importance. **(10)**

   (b) What are the factors that govern the price elasticity of demand in general? **(7)**

   (c) Define an indifference curve and describe its properties with graphical presentations. **(6 ⅓)**

Contd P/2

HUM 701/ARCH

4. Write short notes on any THREE of the following: **(23 ⅓)**

(a) 'Change in supply' and 'change in quantity supplied'

(b) Substitution effect and income effect of a price change

(c) Market equilibrium and its mechanism

(d) Optimal consumption point of a consumer

SECTION – B

There are **FOUR** questions in this section. Answer any **THREE**.

5. (a) Graphically explain the stages of production. Why does a firm produce at stage II? **(13 ⅓)**

(b) What do you mean by return to scale? Explain constant, increasing and decreasing return to scale. **(10)**

6. (a) "GDP is not a perfect measure of the happiness or quality of life" – Explain. **(7)**

(b) Describe the circular flow of income and expenditure in a two sector economy. **(12)**

(c) What do you mean by potential GDP? **(4 ⅓)**

7. (a) What do you mean by aggregate demand and aggregate supply? Give reasons why the aggregate supply curve should slope upward and aggregate demand curve slope down ward. **(15)**

(b) Graphically explain macro failure. **(8 ⅓)**

8. (a) Define real GDP and nominal GDP. **(7 ⅓)**

(b) Write short notes on (Any two): **(16)**

(i) Money supply

(ii) Economic recession

(iii) Human Development Index (HDI)

L-1/T-2/ARCH **Date : 28/02/2018**

BANGLADESH UNIVERSITY OF ENGINEERING AND TECHNOLOGY, DHAKA

L-1/T-2 B. Arch. Examinations 2016-2017

Sub : **ARCH 175** (Art History)

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. 4 and any **TWO** from the rest.

1. Describe the subject matter, purpose, tools and techniques of cave paintings with examples. **(23)**

2. What is 'pictorial narration'? Give brief description of the two examples of Sumerian Art style that represents pictorial narration and illustrate them with simple annotated sketches. **(5+13+5=23)**

3. In which art style, artists were able to use their skill but not their creativity and why? What are the main features of Early Christian Art and Byzantine Art style? Give brief descriptions with simple illustrations. **(8×3=24)**

4. Give short notes on any THREE topics of the following: **(5+18=23)**

   (a) Egyptian Art

   (b) Fresco and stained glass painting

   (c) Art History and Art Appreciation

   (d) Greek Sculpture.

SECTION – B

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

5. Who are the pioneer artists of Modern Art in Bangladesh? Write elaborately about the subjects and characteristics of their painting. **(5+18=23)**

6. Describe and illustrate the characteristics of Impressionism and expressionism art. **(13+10=23)**

Contd P/2

ARCH 175

7. Write about the two basic technique of painting "Chiaroscuro" and "Stumato" in Renaissance period. Illustrate in short about the art work named "The Last Supper". **(13+10=23)**

8. Give short notes on any three topics. **(8×3=24)**

   (a) Analytical cubism and Synthetic cubism

   (b) De-Stijl

   (c) Futurism and Suprematism

   (d) Post Impressionism.

L-1/T-2/ARCH **Date : 06/03/2018**

BANGLADESH UNIVERSITY OF ENGINEERING AND TECHNOLOGY, DHAKA

L-1/T-2 B. Arch. Examinations 2016-2017

Sub : **HUM 147** (Introduction to Sociology)

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 any **THREE**.

1. (a) Explain five basic steps in the scientific research methods that sociologists and other researchers follow to investigate social problems. **(13 ⅓)**

   (b) Define socialization. Describe the steps and types of socialization process. **(10)**

2. (a) Critically discuss the concept of role theory. **(13 ⅓)**

   (b) What is sociological imagination? Explain the general guidelines of Sociological imagination. **(10)**

3. (a) Define deviance. Discuss the causes of deviance in society. **(13 ⅓)**

   (b) Why do you think more households today have a television than a telephone? **(10)**

4. Write short notes on any THREE of the following: **(23 ⅓)**

   (a) Social stratification

   (b) Social mobility

   (c) Cultural lag

   (d) Counter culture

Contd P/2

HUM 147

SECTION – B

There are **FOUR** questions in this section. Answer any **THREE**.

5. (a) How do you define physical environment and man-made environment? **(6)**

   (b) 'Everything is connected to everything else' – Explain in terms of human ecology. **(6)**

   (c) What are the negative impacts of global warming? **(11 ⅓)**

6. (a) What is the main difference between urbanization and urbanism? **(6)**

   (b) Briefly discuss the socio-economic differences between 'pre-industrial cities', 'industrial cities' and 'post industrial cities'? **(11 ⅓)**

   (c) What are the advantages and disadvantages of megacities? **(6)**

7. (a) Define human migration. Briefly discuss the causes and effects of rural to urban migration. **(12)**

   (b) Describe the stages of demographic transition theory. **(11 ⅓)**

8. Write short note on any three of the following: **(23 ⅓)**

   (a) Globalization

   (b) Consequences of Industrial revolution

   (c) Features of capitalism

   (d) Sources of social change.