

NATIONAL UNIVERSITY OF SINGAPORE

AR2226/ GEK2045 – HISTORY AND THEORY OF MODERN ARCHITECTURE

(SEMESTER I: 2012-13)

TIME ALLOWED – 2 HOURS

INSTRUCTIONS TO CANDIDATES

1. This examination paper consists of **FIVE (5)** questions and comprises **ELEVEN (11)** printed pages.
2. Candidates must answer **all FIVE (5)** questions. Enter all your answers in the answer booklet given. Make sure that the question number is stated at the start of each answer and that your student ID number is clearly written on the front page of the answer booklet.
3. This examination will constitute 50% of your overall grade.
4. **All** question and answer booklets are to be submitted at the end of the exam.
5. This is a **CLOSED BOOK EXAMINATION**.

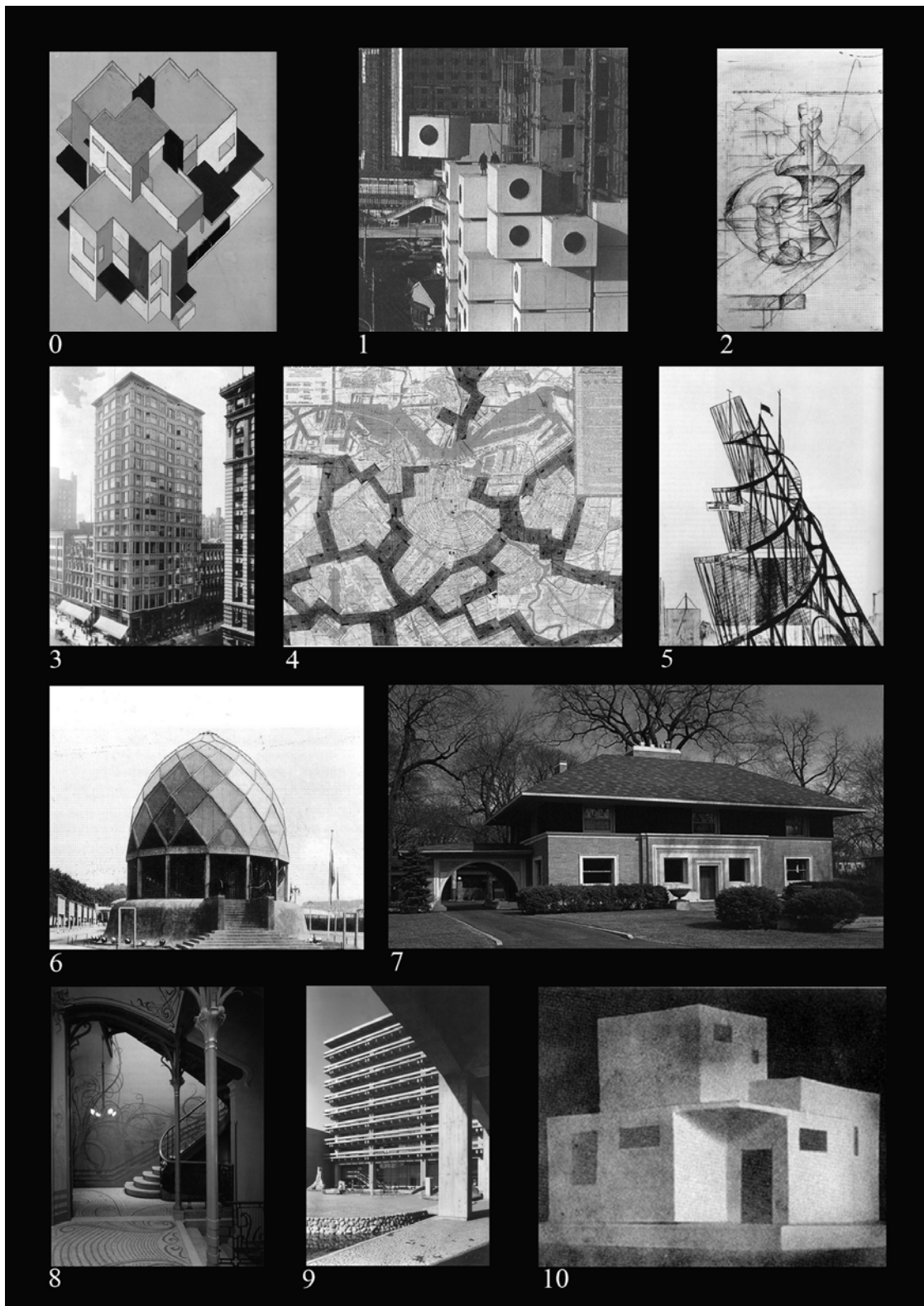


Figure A

Question 1

Figure A in the previous page includes 11 images (including an example) of buildings, a model, and drawings. These images respectively represent different art and architectural movements in the 19th and 20th centuries. Choose a movement that responds to each image from the list below.

List of movements:

- a) Amsterdam School
- b) Archigram
- c) Arts and Crafts
- d) Art Nouveau
- e) Chicago School
- f) De Stijl
- g) Deutscher Werkbund (German Work Federation)
- h) Deconstructivism
- i) German Expressionism
- j) Italian Futurism
- k) Italian Rationalism
- l) Japanese Modernism
- m) Metabolism
- n) National Romanticism
- o) New Objectivism (Neue Sachlichkeit)
- p) Post-modernism
- q) Prairie School
- r) Russian Constructivism
- s) Situationist International

Example

0 – f

(30 Marks)

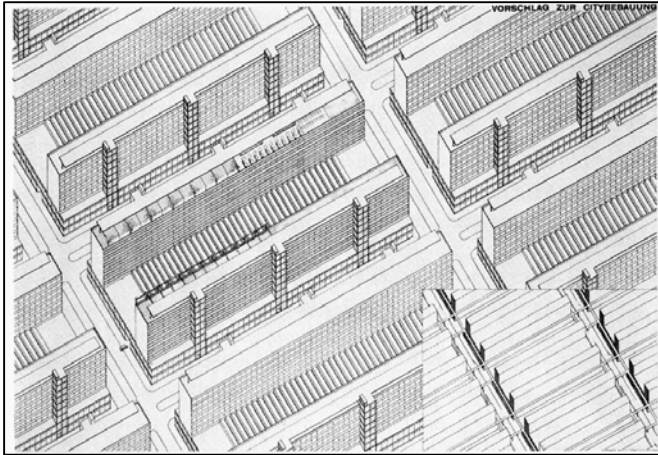


Figure B
Project for the construction of a city (Residential blocks),
Ludwig Hilberseimer, 1930

Quotation A

The architecture of the metropolis depends essentially on the solution both of the elementary cell and urban organism as a whole.

Quoted from *Metropolitan Architecture*, Ludwig Hilberseimer, 1927

Question 2

Ludwig Hilberseimer, the designer of buildings in Figure B and the author of Quotation A, is one of the architects of Neue Sachlichkeit in the 1920s and 1930s. Taking this into account, answer the following questions.

- a) What are the *elementary cell* and *urban organism* that the designer discusses in Quotation A?

(5 Marks)

- b) Describe the relationship between *elementary cell* and *urban organism*, and the quality that arises from such a relationship by referring to Figure B.

(10 Marks)



Figure C
 Obus A Project for Algiers, Overall model
 Le Corbusier, 1933

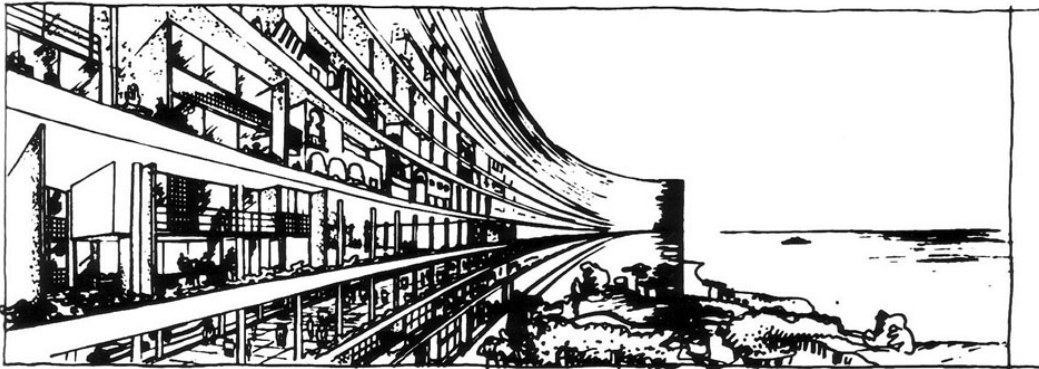


Figure D
 Obus A Project for Algiers, Sketch for individual apartment units,
 Le Corbusier, 1933

Question 3

Le Corbusier, the designer of the urban design project in Figure C and D, proposed the Domino Frame in 1914. Taking this into account, answer the following questions.

- a) Describe the relationship between the expressway, residential units and existing urban fabric by using Figure C.

(5 Marks)

- b) Describe how the idea of the Domino Frame is employed to the project by using Figure D.

(10 Marks)

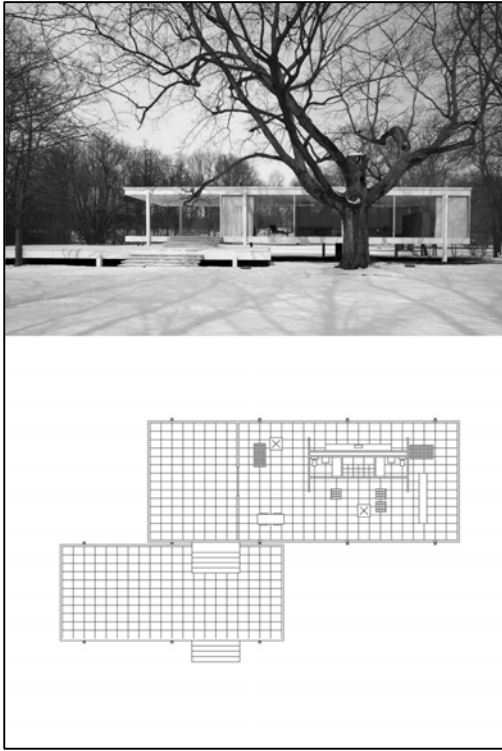


Figure E
Farnsworth House, Mies van der Rohe, 1951

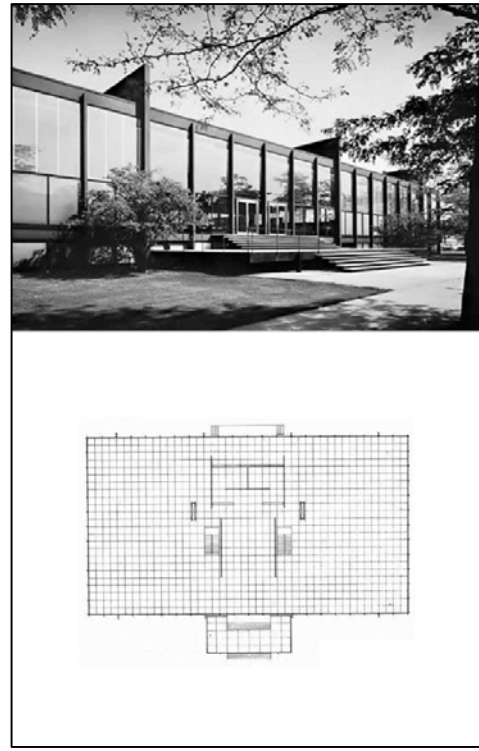


Figure F
Crown Hall, IIT, Mies van der Rohe, 1956

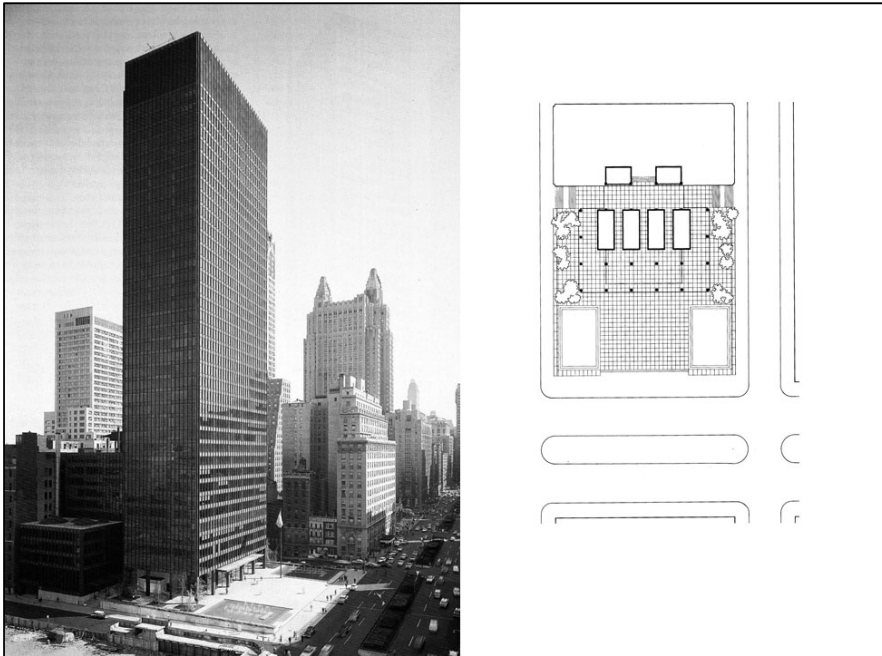


Figure G
Mies van der Rohe, Seagram Building, 1959

Question 4

Figures E, F and G show the works of Mies van der Rohe in the United States in the 1950s. Answer the following questions by using these Figures.

- a) Describe the formal characteristics shared by the three works.
(5 Marks)
- b) The architect uses different geometrical compositions for the private residences and public buildings respectively. Describe the differences by using Figures E and F.
(5 Marks)
- c) Works shown in Figures F and G both reconcile contradicting design characteristics. Describe such characteristics.
(10 Marks)

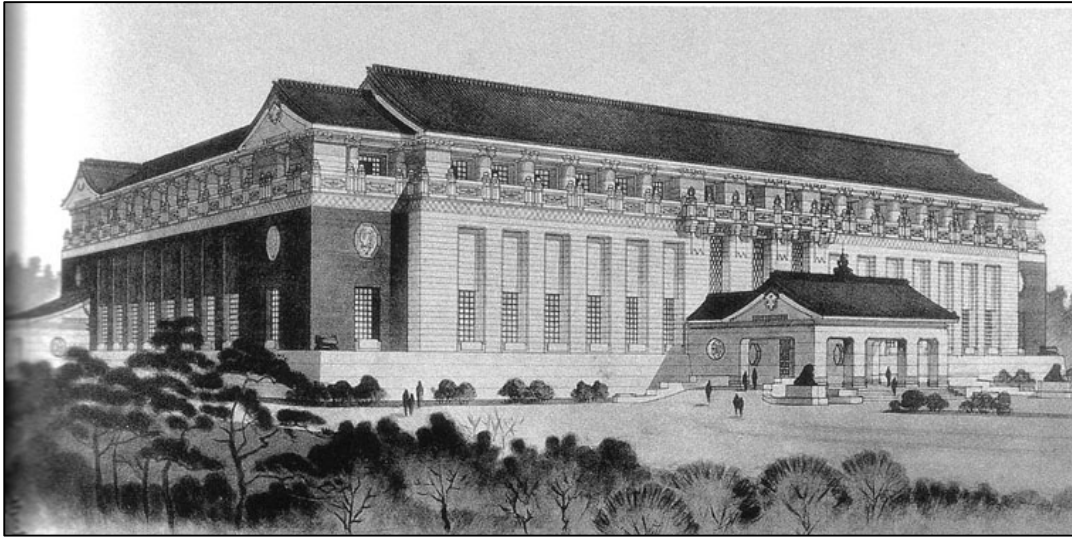


Figure H
 Tokyo Imperial Household Museum (Winning Scheme for the competition),
 Jin Watanabe, 1931

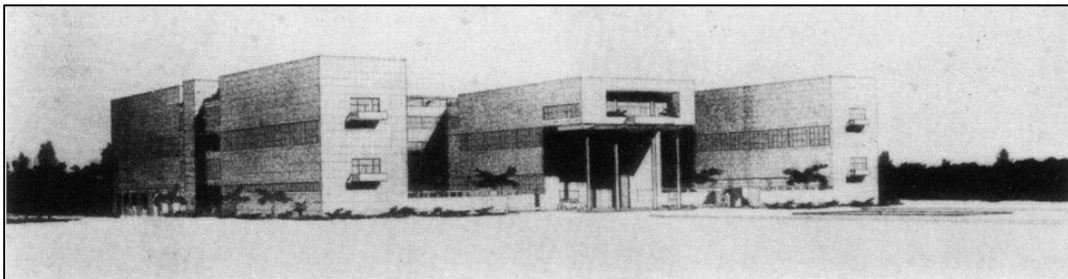


Figure I
 Tokyo Imperial Household Museum, (Entry for the competition)
 Kunio Maekawa, 1931

Question 5

Figures H and I show the two competition entry schemes for the Tokyo Imperial Household Museum. Answer the following questions by using these figures.

- a) The designer for the entry in Figure H expressed Japanese architectural traditions through its form. Describe the formal characteristics that express such traditions.

(5 Marks)

- b) The designer for the entry in Figure I criticized the design in Figure H. Describe the criticism by referring to the form, materials and technology that the scheme employed.

(5 Marks)

- c) Describe the characteristics of the entry in Figure I by referring to the materials and technology that the scheme employed.

(10 Marks)

- The End -