

UNIVERSITI SAINS MALAYSIA

Second Semester Examination  
Academic Session 2004/2005

Mac 2005

**RAK 344E – History and Theory of Architecture I**  
**(Sejarah dan Teori Seni Bina I)**

Duration: 3 hours  
(Masa: 3 jam)

Please check that this examination paper consists of **SIX** pages of printed material before you begin the examination.

*(Sila pastikan bahawa kertas peperiksaan ini mengandungi **ENAM** muka surat yang tercetak sebelum anda memulakan peperiksaan ini.)*

**Instructions:** Answer **SEVEN** questions only.  
**ONE** question from **Section A (COMPULSORY)**.  
**TWO** questions from **Section B**  
**TWO** questions from **Section C**  
**TWO** questions from **Section D (COMPULSORY)**

**(Arahan:** Jawab **TUJUH** soalan sahaja)  
**SATU** soalan daripada **Bahagian A (WAJIB)**  
**DUA** soalan daripada **Bahagian B**  
**DUA** soalan daripada **Bahagian C**  
**DUA** soalan daripada **Bahagian D (WAJIB)**

**Section A: (COMPULSORY)****Bahagian A (WAJIB)**

1. (a) Compare and contrast the two models used in to narrate events in a timeline.
  - (b) Propose a method to shift historical explanations from Eurocentricism to another better model.
  - (c) What are the implications of this shift?
- 
- (a) *Beza dan bandingkan kedua-dua model yang digunakan untuk menerangkan tentang peristiwa dalam talian waktu.*
  - (b) *Cadangkan satu kaedah bagaimana penerangan sejarah dapat dianjakkan dari Eurocentrism ke satu model lain yang lebih baik.*
  - (c) *Apakah implikasi anjakan ini?*

(10 marks/markah)

**Section B (Answer TWO questions only)****Bahagian B (Jawab DUA soalan)**

2. (a) Sketch out the timeline of human civilization between and including the pre and post "Egyptian" period.
  - (b) Briefly explain the culture, which developed at the same time as the "Egyptian" culture.
  - (c) Illustrate the architectural forms of both cultures and the rationale behind the architecture.
- 
- (a) *Lakarkan talian waktu tamadun manusia di antara dan termasuk pra dan pasca zaman "Mesir".*
  - (b) *Jelaskan dengan ringkas budaya yang berkembang pada waktu yang sama dengan budaya zaman "Mesir" ini.*
  - (c) *Ilustrasikan bentuk-bentuk arkitektur kedua-dua budaya di atas dan rasional arkitektur di sebaliknya.*

(15 marks/markah)

3. (a) Sketch out the timeline of human civilization between and including the pre and post "Mediaeval" period.
- (b) Briefly explain the culture which developed at the same time as the "Mediaeval" culture.
- (c) Illustrate the architectural forms of both culture and the rationale behind the architecture.
- (a) *Lakarkan talian waktu tamadun manusia di antara dan termasuk pra dan pasca zaman "Kegelapan"*
- (b) *Jelaskan dengan ringkas budaya yang berkembang pada waktu yang sama dengan budaya zaman "Kegelapan" ini*
- (c) *Ilustrasikan bentuk-bentuk arkitektur kedua-dua budaya di atas dan rasional arkitektur di sebaliknya.*

(15 marks/markah)

4. (a) Sketch out the timeline of human civilization between and including the pre and post "Modern" period.
- (b) Briefly explain the culture which developed at the same time as the "Modern" culture.
- (c) Illustrate the architectural forms of both culture and the rationale behind the architecture.
- (a) *Lakarkan talian waktu tamadun manusia di antara dan termasuk pra dan pasca zaman "Moden"*
- (b) *Jelaskan dengan ringkas budaya yang berkembang pada waktu yang sama dengan budaya zaman "Moden" ini*
- (c) *Ilustrasikan bentuk-bentuk arkitektur kedua-dua budaya di atas dan rasional arkitektur di sebaliknya.*

(15 marks/markah)

**Section C: (Answer TWO questions only)**  
**Bahagian C: (Jawab DUA soalan)**

5. (a) What is **power** and what is its **operational structure**?
- (b) How does power operate in the determination of the historical explanation of **national architecture**?
- (c) What are the limits of national architecture as a basis for any historical explanation and in what ways can the **limits be broken**?
- (a) *Apakah erti **kuasa** dan apakah **struktur operasionalnya**?*
- (b) *Bagaimanakah kuasa ini beroperasi dalam penentuan penerangan sejarah **arkitektur nasional**?*
- (c) *Apakah **batasan** arkitektur nasional sebagai asas penerangan sejarah dan apakah cara-cara untuk **memecahkan batasan** ini?*

(15 marks/markah)

6. (a) *Sketch out an architecture based on a particular **ideology**.*
- (b) *What is the relationship between **ideology** and **power**?*
- (c) *Can an architect evade the production of **ideological architecture**?*
- (a) *Lakarkan satu contoh arkitektur yang berlandaskan sesuatu **ideologi**.*
- (b) *Apakah hubungan **ideologi** dengan **kuasa**?*
- (c) *Dapatkah seseorang arkitek lari dari penglibatannya dalam penghasilan **arkitektur berideologi**?*

(15 marks/markah)

7. What are your views of the following excerpt in the context of the recent tsunami?

*Apakah pandangan anda tentang petikan di bawah dalam konteks bencana tsunami baru-baru ini?*

**Excerpt/Petikan**

"The vignette of the Roof-Roof house, for example, shows that the 'prevailing wind', forced from the ground floor up to the roof, only works as a diagram. On site, the directional air movement, if any, would be prevented by neighbouring houses. Roof slats not only let in the morning but also the midday sun whose piercing heat must be stored in the building mass. It seems that local climatical forces are not taken seriously, perhaps even misunderstood, just like the misunderstanding of the plate tectonic which had generated the Menara Boustead in a country without earthquakes having to withstand forces up to 6.5 on the Richter scale. This calls into question Yeang's own notion of 'appropriate technology'. Perhaps Yeang is predicting that plate tectonic shifts will at some time make Malaysia earthquake prone. This would demolish his belief that climate is the 'unchangeable' factor in design."  
<http://www.hbp.usm.my/wanb/papers/tropmod.htm>

(15 marks/markah)

**Section D: (COMPULSORY)**

**Bahagian D: (WAJIB)**

8. In Roman civilisation, their master builders were very popular in mastering the construction of 'round arch technology' which helped them to construct long span structures with wide openings on wall system to replace the existing technology of 'post and lintel' and 'load bearing walls' construction. Please sketch and describe as many types of 'the round arches' technology progressed and improved by the master builders as you know, which had influenced the building design on that time before you could describe how did they successfully manage to construct load bearing dome construction based on similar application to the concept of round arch technology.

*Pada zaman tamadun Rumawi, tukang-tukang binaan Rumawi sangat terkenal dengan binaan rentang teknologi pintu gerbang separa bulat (round arches) untuk menggantikan binaan struktur 'post dan lintel' dan 'dinding menanggung beban'. Lakar dan huraikan seberapa banyak jenis progres kemajuan teknologi 'pintu gerbang separa bulat' yang telah dimajukan untuk rekabentuk bangunan pada zaman tersebut oleh tukang-tukang binaan Rumawi sebelum anda menghuraikan bagaimana sehinggakan mereka berjaya membina berasaskan konsep pintu gerbang ini kepada binaan kubah separa bulat menanggung beban (dome).*

(15 marks/markah)

9. Please sketch a side section (short cross-cut section) of a Gothic Cathedral in France and list down 10 names of its interior space and/or building structure, which you know in this side section. Please describe how this structural system can help bear the overall building load and influence the design of its interior and exterior.

*Lakarkan satu keratan sisi (keratan pendek) bangunan Katedral Gothik di Negara Perancis dan senaraikan sepuluh nama ruang dan/atau struktur bangunan yang terdapat pada keratan bangunan tersebut. Huraikan bagaimana sistem struktur ini dapat membantu menanggung beban bangunan katedral ini serta mempengaruhi rekabentuk bangunan dalaman dan luarannya.*

(15 marks/markah)