

Angka Giliran: \_\_\_\_\_

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UNIVERSITI SAINS MALAYSIA

Second Semester Examination  
Academic Session 2006/2007

April 2007

**RAK 344E – Sejarah dan Teori Senibina**  
(*History and Theory of Architecture*)

Masa: 3 jam  
(*Duration: 3 hours*)

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

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

Pelajar dibenarkan menjawab semua soalan dalam Bahasa Inggeris ATAU Bahasa Malaysia sahaja.

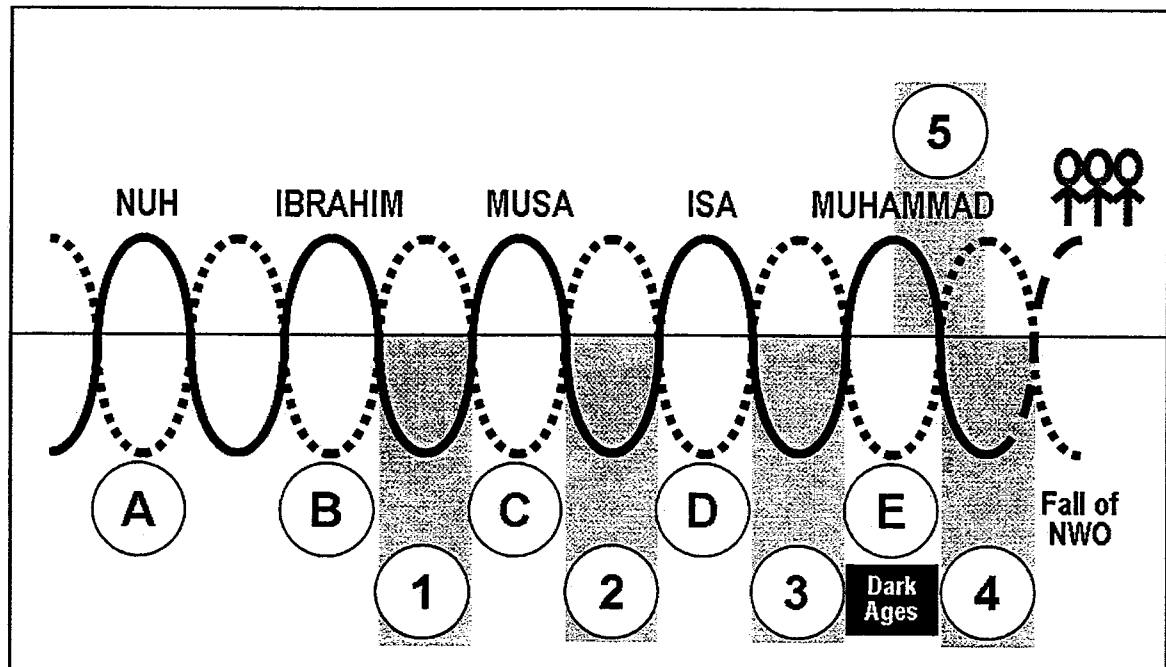
*Students are allowed to answer all questions either in English OR in Bahasa Malaysia only.*

**Arahan:**      **Bahagian A: WAJIB**  
                  **Bahagian B: Jawab DUA soalan.**  
                  **Bahagian C: Jawab DUA soalan.**  
                  **Bahagian D: Jawab SEMUA soalan.**

**Instruction**    **Section A : COMPULSORY**  
                  **Section B : Answer TWO questions.**  
                  **Section C : Answer TWO questions.**  
                  **Section D : Answer ALL questions.**

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

1.



**Gambarajah 1: Sejarah Berkitar Lwn Sejarah Linear |**  
**Figure 1: Cyclical Vs. Linear History.**

Isi ruang kosong di bawah berdasarkan Gambarajah 1.  
 Fill in the following blanks based on Figure 1.

	<b>Peristiwa Sejarah   <i>Historic Events</i></b>		<b>Arkitektur   <i>Architecture</i></b>
<b>A</b>		<b>1</b>	
<b>B</b>		<b>2</b>	
<b>C</b>		<b>3</b>	
<b>D</b>		<b>4</b>	
<b>E</b>		<b>5</b>	

(20 markah/marks)

...3/-

**Bahagian B:** Jawab DUA soalan sahaja.  
*Section B: Answer TWO questions only.*

2. (a) Apakah ideologi asas dalam Gambarajah 1?  
(b) Terangkan erti ideologi ini dalam konteks Penghasilan Arkitektur.  
(c) Tunjukkan bagaimana ideologi ini digunakan hari ini.

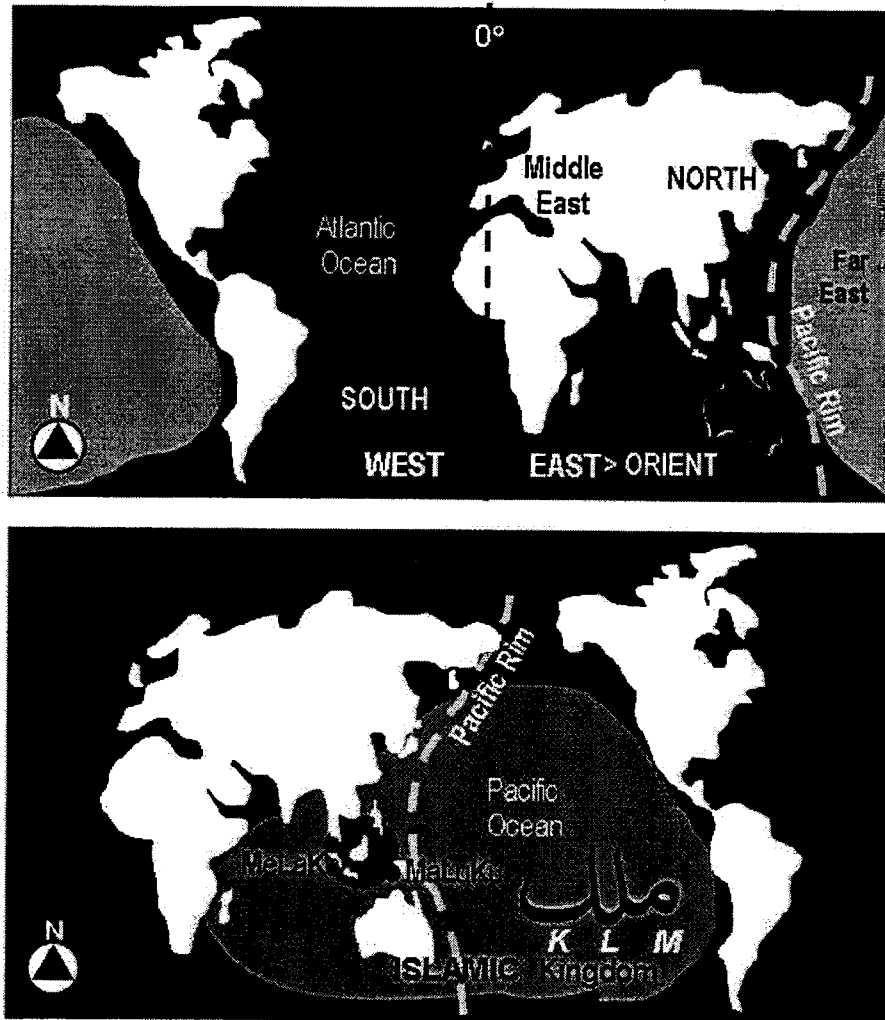
- (a) What is the basis of the ideology in Figure 1?*  
*(b) What is the significance of this ideology in the Production of Architecture?*  
*(c) Show how this ideology is used today.*

(15markah/ marks)

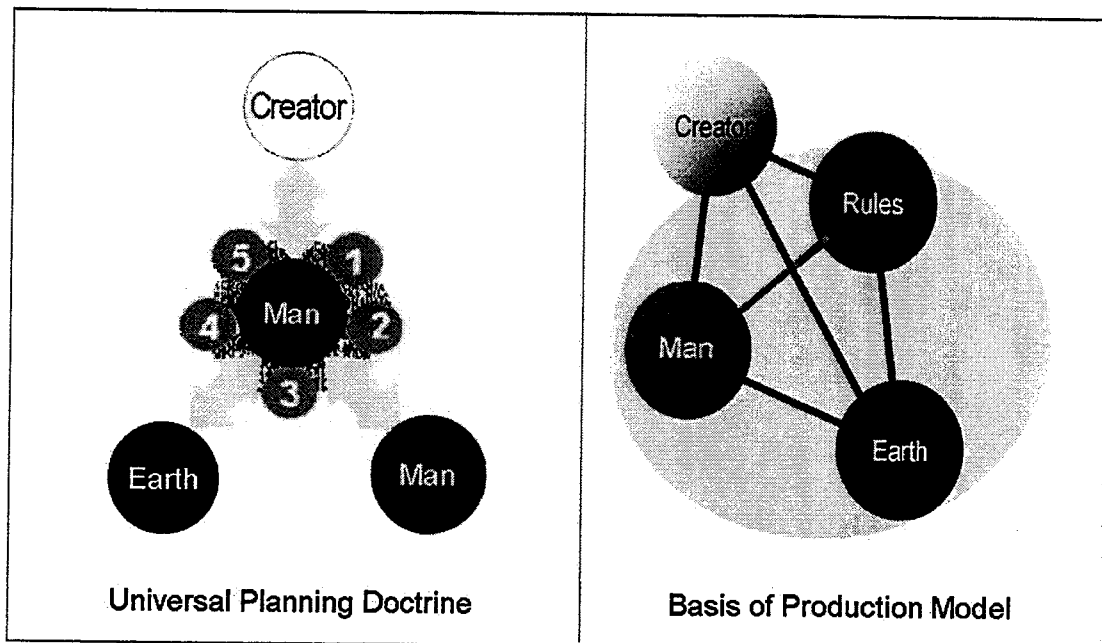
3. (a) Apakah ideologi-ideologi asas di dalam representasi-representasi bumi dalam Gambarajah 2?  
(b) Apakah pentingnya perbandingan kedua representasi tersebut?  
(c) Tunjukkan bagaimana perbandingan ini boleh mempengaruhi Penghasilan Arkitektur.

- (a) What are the underlying ideologies in the representations of the world in Diagram 2?*  
*(b) What is the significance of the comparison of these representations?*  
*(c) Show how this comparison can effect the Production of Architecture.*

(15markah/ marks)



**Gambarajah 2:** Representasi Bumi  
**Figure 2:** Representations of the World

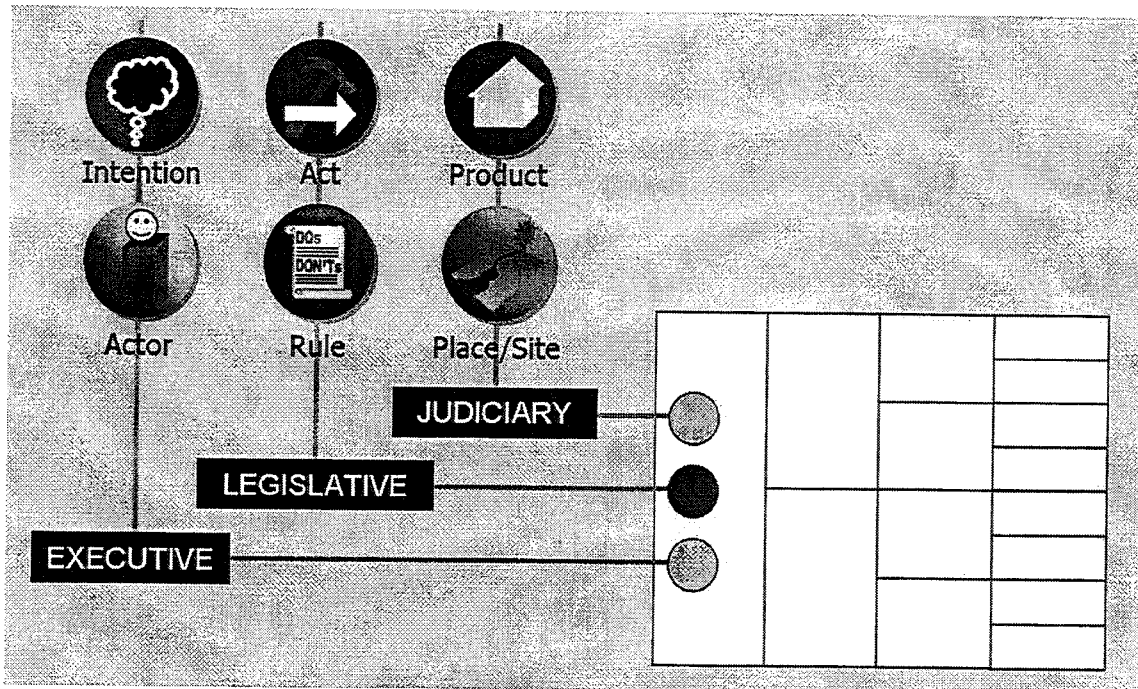


**Gambarajah 3: Perbandingan Model Ideologi**  
**Figure 3: Comparison of Ideologies cart Models**

4. (a) Apakah perbezaan utama di antara ideologi-ideologi yang mendasari skema dalam Gambarajah 3?
- (b) Lakarkan satu contoh rekabentuk dari tiap satu skema ini.
- (c) Apakah kesan disinformasi kepada Penghasilan Arkitektur.
- (a) *What is the main difference between the ideologies underlying the schemas in Figure 3?*
- (b) *Sketch an example of a design based on each of the schemas.*
- (c) *What is the effect of disinformation on Architecture Production.*

(15markah/marks)

**Bahagian C: Jawab DUA** soalan sahaja.  
*Section B: Answer TWO question only.*



**Gambarajah 4: Penghasilan, Negara dan Kuasa**  
*Figure 4: Production, State and Power*

5. (a) Terangkan hubungkait Penghasilan, Negara dan Kuasa dalam **Gambarajah 4** menggunakan **arkitektur Eropah** dari mana-mana zaman.
- (b) Apakah kedudukan arkiteknya di dalam skema ini?
- (a) *Explain the relationship between Production, State and Power shown in Figure 4 using European architecture in any era.*
- (b) *What is the position of the architect in this schema?*

(10/markah/ marks)

6. (a) Terangkan hubungkait Penghasilan, Negara dan Kuasa dalam Gambarajah 4 menggunakan **arkitektur bukan Eropah** dari mana-mana zaman.
- (b) Apakah kedudukan arkiteknya di dalam skema ini?
- (a) *Explain the relationship between Production, State and Power shown in Figure 4 using **non-European architecture** in any era.*
- (b) *What is the position of the architect in this schema?*

(10markah/marks)

## 7. Petikan/ Extract:

*"Architects working in Asian countries face crucial and fundamental challenges - this continent is so promising as to be the future of the world, but it is also the place with most complicated and severe problems. One consequence of free trade and service agreements, especially amongst Asia and Pacific countries is architect educated in one country may work in any country in the region. Special strategies in educating architects in this region should be devised in order to prepare future architects to deal with the challenges."*

Bincangkan kenyataan di atas dalam salah satu konteks di bawah:  
*Discuss the statement in one of the contexts below:*

- (a) **Cultural Sensitivity**  
*The complexity caused by the great cultural diversity in this continent is magnified by the introduction of modernism and globalization, especially in its urban centers. The advancement of information technology and communication has made the articulation of the already complex regional identities even more difficult. Developing cultural sensitivity to work in multi-cultural setting as well as mastering design in one particular culture is crucial in enabling students to cope with such situation.*

**ATAU/ OR**

(b) ***Economic Development***

*Economic growth in some parts of Asia is very promising, but this region also has some most severe economic problems. Architecture is definitely related to the economic conditions of a particular place. Students are notorious in not having sense of economic aspects of building. Great architecture is often associated with higher economic class with unlimited budget. However, solving architectural problems with extremely limited budget and working closely with poor people are also great achievement which educational institution should pay more attention to.*

**ATAU/ OR**

(c) ***Technological Advancement***

*Building construction and technology show immense progress and variety, especially in the rapidly growing centers in Asia. High-tech building materials and construction technology spread through Asia and the Pacific especially in mega-cities such as Tokyo, Bangkok and Jakarta. Architects face challenges in developing the genius loci; using appropriate construction methods and building materials today.*

**BAHAGIAN D: Jawab SEMUA soalan**

**Section D: Answer ALL questions.**

8. Lakarkan **TIGA (3)** jenis rekabentuk senibina masjid yang unik yang terdapat dalam Tamadun Islam.
- Tandakan ciri-ciri (elemen ruang/objek senibina) utama setiap masjid yang dilakarkan oleh anda.
  - Terangkan lokasi dan zaman/tamadun setiap masjid yang dilakarkan oleh anda hubungan senibinanya dengan pengaruh setempat.
  - Terangkan **TIGA (3)** perbezaan elemen stail senibina mengapa ketiga-tiga masjid ini berbeza antara satu sama lain.



*Sketch three types of mosques which show their unique architectural design in Islamic Civilization.*

- (a) *Show the primary characters (architectural spatial elements/objects) to each mosque that you have drawn.*
- (b) *Explain the location and period of civilization of each mosque that you sketch and its architectural relationship to the regional influences.*
- (c) *Give **THREE (3)** elements of the architectural styles why these mosques are different to each other.*

(10 markah/marks)

9. **Lakarkan TIGA (3) jenis rekabentuk senibina gereja yang terdapat dalam Tamadun Eropah.**

- (a) **Tandakan ciri-ciri (elemen ruang/objek senibina) utama setiap gereja yang dilakarkan oleh anda.**
- (b) **Terangkan lokasi dan zaman setiap gereja yang dilakarkan oleh anda hubungannya dengan pengaruh setempat.**
- (c) **Terangkan TIGA (3) perbezaan elemen stail senibina mengapa ketiga-tiga gereja ini berbeza antara satu sama lain.**

*Sketch three types of cathedrals which show their unique architectural design in Europe.*

- (a) *Show the primary characters (architectural spatial elements/objects) to each cathedral that you have drawn.*
- (b) *Explain the location and period of civilization of each cathedral that you sketch and its architectural relationship to the regional influences.*
- (c) *Give **THREE (3)** elements of the architectural styles why these cathedrals are different to each other.*

(10markah/marks)

...10/-

10. Lakarkan rekabentuk konsep pembinaan struktur: (1). Gerbang Romawi; (2). Vault Romawi; (3). Kubah bangunan Pantheon; dan (4). Kubah pedentif bangunan Hagia Sophia.
- (a) Namakan elemen-elemen penting binaan struktur yang terdapat dalam setiap lakaran tersebut.
  - (c) Dengan menggunakan lakaran 'anak panah', tunjukkan konsep aliran beban bangunan yang ditanggung oleh struktur-struktur tersebut.
  - (c) Terangkan **DUA (2)** sebab utama mengapa tukang bina Romawi mengutamakan penggunaan binaan 'gerbang' berbanding 'post dan lintel' dalam rekabentuk bangunan mereka.

*Sketch: (1). Roman arch; (2). Roman cross vault, (3). Pantheon's dome; and (4). Pedentive dome of Hagia Sophia which are able to show their structural concept of the construction.*

- (a) *Name all important elements of the structural construction in each drawing.*
- (b) *By using 'arrows signage' for your sketches, show the concepts of building loads carried by all of these Roman structures.*
- (c) *Give **TWO (2)** reasons why the Roman master builders prefer to use 'arch' compared to 'post and lintel' construction to express in their building design.*

(10 markah/marks)