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UNIVERSITI SAINS MALAYSIA

Second Semester Examination  
2009/2010 Academic Session

April/May 2010

**RMK 252 – Principles of Project Management**  
*[Pengantar Pengurusan Projek]*

Duration: 3 hours  
*[Masa: 3 jam]*

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

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

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

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

Answer **FIVE** questions only. **SECTION A** is **COMPULSORY**. Answer **TWO** questions from **SECTION B** and **TWO** questions from **SECTION C**.

*Jawab **LIMA** soalan sahaja. **BAHAGIAN A** adalah **WAJIB**. Jawab **DUA** soalan dari **BAHAGIAN B** dan **DUA** soalan dari **BAHAGIAN C**.*

In the event of any discrepancies, the English version shall be used.

*Sekiranya terdapat sebarang percanggahan pada soalan peperiksaan, versi Bahasa Inggeris hendaklah digunapakai.*

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**BAHAGIAN A: (Compulsory)**  
**SECTION A: (Wajib)**

1. (a) What is management process? State and explain every element of management process?

*Apakah dia proses pengurusan? Nyata dan terangkan setiap elemen proses pengurusan.*

(5 marks/markah)

- (b) Name the **THREE** major theories during the Classical era and explain the key characteristics of the three theories.

*Namakan **TIGA** teori utama semasa era Klasikal dan terangkan ciri-ciri utama teori-teori tersebut?*

(5 marks/markah)

- (c) What is System theory? What is Contingency theory? How the two theories compliment each other?

*Apakah teori Sistem? Apakah teori Kontingensi? Bagaimana kedua-dua teori tersebut menyokong antara satu sama lain?*

(5 marks/markah)

- (d) What is general organizational Environment? How does this Environment influence the performance of every organization?

*Apakah dia Alam Sekitar Am Organisasi? Bagaimanakah alam sekitar tersebut mempengaruhi prestasi organisasi?*

(5 marks/markah)

**SECTION B**  
**BAHAGIAN B**

2. According to Barney and Griffin (1992), organizational goals serve **Four (4)** basic functions. Explain in detail what these four functions are and describe how these functions can make an organization more effective.

*Menurut Barney dan Griffin (1992), penetapan matlamat organisasi menyumbang terhadap **Empat (4)** fungsi asas. Jelaskan dengan terperinci keempat-empat fungsi tersebut serta bincangkan bagaimana fungsi-fungsi ini dapat menjadikan sesebuah organisasi tersebut lebih berkesan.*

(20 marks/markah)

3. (a) Describe the ways in which the formal structure of an organization can be defined and explained.

*Huraikan bagaimana struktur formal sesebuah organisasi boleh dinyatakan serta dijelaskan.*

(10 marks/markah)

- (b) Traditional organisational designs can be grouped into **Three (3)** basic designs of simple, functional and divisional. Elaborate on the strengths and weaknesses of each of these common traditional organizational designs.

*Struktur organisasi tradisional boleh dikategorikan kepada **Tiga (3)** rekabentuk asas, iaitu, rekabentuk mudah, mengikut fungsi serta mengikut jabatan/bahagian. Huraikan kelebihan serta kekurangan setiap rekabentuk organisasi tradisional lazim ini.*

(10 marks/markah)

4. (a) Give **Two (2)** definitions of motivation.

*Berikan **Dua (2)** definisi motivasi.*

- (b) Discuss any **Two (2)** management models with diagram and how these models can be applied in the construction industry.

*Huraikan mana-mana **Dua (2)** model pengurusan berikut beserta lakaran rajah dan bagaimana ianya dapat diaplikasikan dalam industri pembinaan.*

- (i) Behavioral Model
- (ii) Locus of Leadership
- (iii) Groups and Teams
- (iv) Abraham Maslow – Maslow's Hierarchy of Needs Theory

(20 marks/markah)

**SECTION C**  
**BAHAGIAN C**

5. (a) What is Precedence Diagram? Explain the advantages of Precedence Diagram in planning construction activities.

*Apakah dia Rajah Rentetan? Terangkan kelebihan teknik Rajah Rentetan dalam perancangan kerja-kerja binaan.*

(5 marks/markah)

- (b) Using the information given in **Table 1** and network diagram in **Figure 1**, draw a precedence diagram network and then fill up the boxes with the calculated values.

*Gunakan butir-butir yang diberi dalam **Jadual 1** dan rangkaian dalam **Rajah 1**, lakarkan rangkaian rajah rentetan dan isikan dalam kotak-kotak tersebut dengan nilai-nilai yang dikira.*

- (c) Draw a resource histogram using early start time (EST) values and level the resources accordingly to achieve an optimum aggregation.

*Lakarkan histogram sumber mengikut nilai masa mula awal dan araskan semula supaya pengagihan sumber dalam keadaan optimum.*

<b>Activity Number/ Nombor Aktiviti</b>	<b>Activity Duration/ Jangka Masa Aktiviti</b>	<b>Number of Resources/ Jumlah Sumber</b>	<b>Activities Name/ Nama Aktiviti</b>
1	2	3	Site clearing/Bersih tapak
2	7	4	Footing work/Kerja tapak
3	15	7	Structural work/Kerja struktur
4	8	4	Wall/Dinding
5	5	4	Doors & windows/Pintu & tingkap
6	5	3	Electrical work/Kerja elektrik
7	6	3	Piping work/Kerja paip
8	8	4	Roofing work/Kerja bumbung
9	8	4	Finishing work/Kerja kemas
10	5	4	Painting work/Kerja cat
11	5	3	External work/Kerja luar

**Table 1/Jadual 1**

(15 marks/markah)

Question 5/Soalan 5

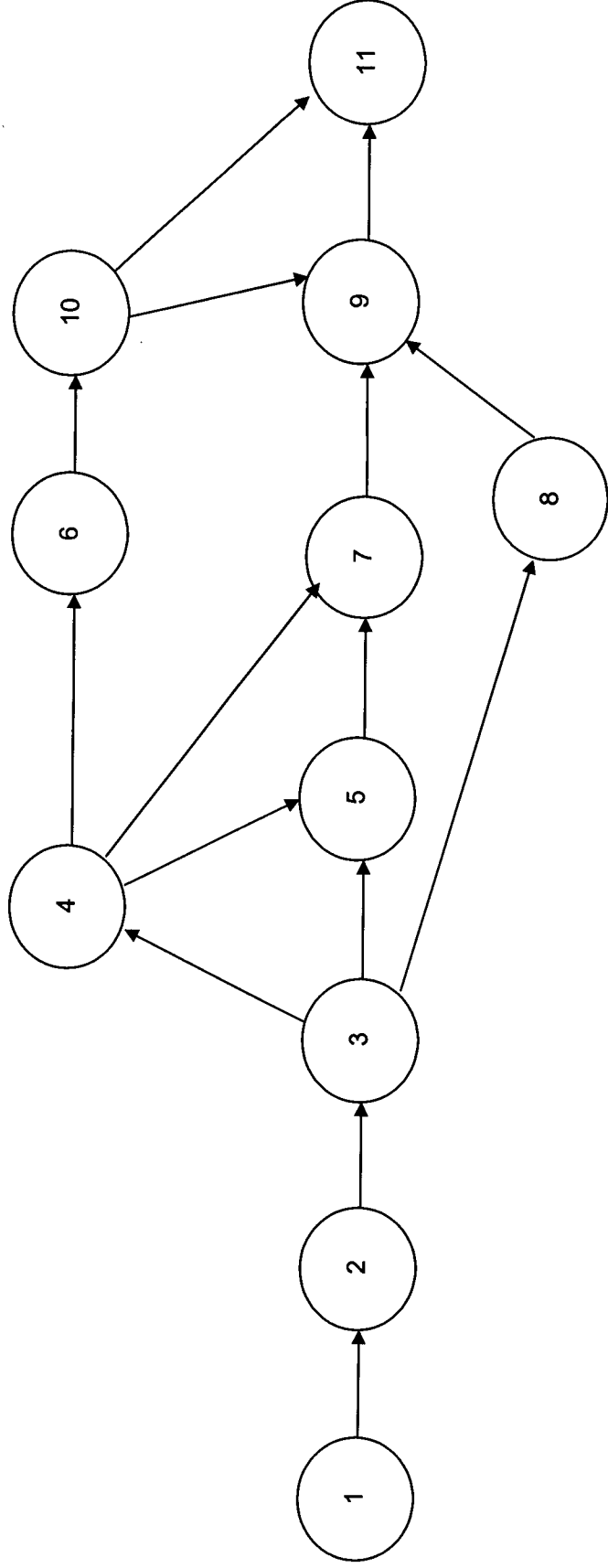


Figure 1/Rajah 1

6. (a) What is cash flow? Explain the advantages of the cash flow technique to contractors.

*Apakah dia aliran tunai? Terangkan kelebihan teknik aliran tunai ini kepada kontraktor.*

(5 marks/markah)

- (b) Prepare a Cash Flow table and a Cost-Time graph base on the following project details: -

Tender Price	:	195,000.00
Project Cost	:	150,000.00
Project Duration	:	6 month
Retention	:	5%
Defect Liability Period	:	6 month

Assume that the profit is equally distributed for the whole of project period and the progress payments are paid one month after contractor submitted their claims.

*Sediakan Jadual Aliran Tunai dan Keluk Kos masa berdasarkan maklumat projek yang berikut:-*

<i>Harga Tender</i>	<i>:</i>	<i>195,000.00</i>
<i>Kos Projek</i>	<i>:</i>	<i>150,000.00</i>
<i>Tempoh Projek</i>	<i>:</i>	<i>6 bulan</i>
<i>Nilai Simpanan</i>	<i>:</i>	<i>5%</i>
<i>Tempoh membaiki kecacatan</i>	<i>:</i>	<i>6 bulan</i>

*Andaikan keuntungan diagih sama rata sepanjang tempoh projek dan bayaran kemajuan dibayar sebulan selepas tuntutan.*

(15 marks/markah)

7. (a) What is a line of balance technique? Explain the advantages of this technique to construction?

*Apakah dia teknik garisan seimbang? Terangkan kelebihan teknik garisan seimbang kepada binaan.*

(5 marks/markah)

- (b) Prepare a Line of Balance Chart for a housing scheme with the following details in **Table 2:-**

*Sediakan satu Carta Garisan Seimbang untuk satu skim perumahan berdasarkan butir-butir berikut dalam **Jadual 2:-***

No./ Bil.	Activities/ Aktiviti	Man hour/Unit Jam Kerja/Unit	Number of workers per activity/Bilangan pekerja setiap aktiviti
1	Foundation/Asas	210	5
2	Structure/Struktur	320	6
3	Wall/Dinding	180	4
4	Pipe/Paip	80	3
5	Electricity/Elektrik	80	3
6	Finishing/Kemasan	140	6

**Table 2/Jadual 2**

**Other details/Butir-butir lain:-**

- Number of unit/*Bilangan unit rumah* = 90 unit
- Rate of output/*Kadar output* = 4 unit per week/*minggu*
- Buffer time/*Masa perantaraan* = 5 days/*hari*
- Working hours, 8 hours per day and 6 days per week/*masa kerja 8 jam sehari dan 6 hari seminggu.*

(15 marks/markah)