
UNIVERSITI SAINS MALAYSIA

Second Semester Examination
2012/2013 Academic Session

June 2013

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

Duration: 3 hours
[Masa: 3 jam]

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

Sila pastikan bahawa kertas peperiksaan ini mengandungi LAPAN 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 digunakan.

SECTION A : COMPULSORY
BAHAGIAN 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 (3)** major theories during the Modification era and explain the key characteristics of the three theories?

*Namakan **Tiga (3)** teori utama semasa era Pertengahan dan terangkan ciri-ciri utama teori-teori tersebut?*

(5 marks/markah)

- (c) State and explain the 12 key concepts of system?

Nyata dan terangkan 12 konsep utama sistem?

(5 marks/markah)

- (d) What is the general organisation environment?

How these environments influence the performance of every organisation?

Apakah dia alam sekitar am organisasi?

Bagaimanakah alam sekitar tersebut mempengaruhi prestasi setiap organisasi?

(5 marks/markah)

SECTION B
BAHAGIAN B

2. In supporting the vision and mission statement of an organization, **Three (3)** main types of goals should be set, namely strategic, tactical and operational goals. Describe each type of these goals and explain the differences these goals have within the context of an organization.

*Di dalam mendukung pernyataan visi and misi sesebuah organisasi, **Tiga (3)** jenis matlamat utama perlu diwujudkan, iaitu matlamat strategik, taktikal and operasi. Jelaskan setiap jenis matlamat ini dan terangkan perbezaan di antara ketiga-tiga jenis matlamat ini di dalam konteks sebuah organisasi.*

(20 marks/markah)

3. (a) Describe the **Five (5)** basis on which departmentalization within an organization may be undertaken.

*Terangkan **Lima (5)** asas yang boleh digunakan untuk tujuan penjabatan di dalam sesebuah organisasi dilaksanakan.*

(10 marks/markah)

- (b) Explain the differences between a matrix organizational structure and a traditional hierarchy based functional organizational structure.

Jelaskan perbezaan di antara struktur organisasi matriks dan struktur organisasi berfungsi yang berasaskan hierarki.

(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
Model Tingkah Laku
- (ii) Locus of Leadership
Lokus Kepimpinan
- (iii) Groups and Teams
Kumpulan dan Pasukan
- (iv) Abraham Maslow – Maslow’s Hierarchy of Needs Theory
Abraham Maslow – Teori Hierarki Keperluan Maslow

(20 marks/markah)

SECTION C
BAHAGIAN C

5. Prepare a Cash Flow Table, a Cost-Time Graph and Maximum Cash Required Graph base on the following project details: -

Tender Price	:	480,000.00
Profit	:	20%
Project Duration	:	9 months
Retention	:	5%
Defect Liability Period	:	6 months

Assume that the profit is evenly distributed throughout the project period and progress payments are paid a month after each claims.

Sediakan Jadual Aliran Tunai, Keluk Kos-Masa dan Keluk Wang Maksimum diperlukan berdasarkan maklumat projek yang berikut:-

<i>Harga Tender</i>	:	<i>480,000.00</i>
<i>Untung</i>	:	<i>20%</i>
<i>Tempoh Projek</i>	:	<i>9 bulan</i>
<i>Nilai Simpanan</i>	:	<i>5%</i>
<i>Tempoh membaiki kecacatan</i>	:	<i>6 bulan</i>

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

(20 marks/markah)

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

Apakah dia teknik garisan seimbang? Terangkan kelebihan teknik ini dalam pembinaan.

(5 marks/markah)

- (b) Prepare a line of balance chart for a housing scheme with the following details:-

No.	Activities	Man hour/unit	Number of workers per activity
1.	Foundation	210	5
2.	Structure	320	6
3.	Wall	180	4
4.	Pipe	80	3
5.	Electricity	80	3
6.	Finishing	160	6

TABLE 1

- Number of unit = 100 unit
- Rate of output = 3.5 unit week
- Buffer time = 5 days
- Working hour, 8 hour per day and 6 day per week

Sediakan satu carta garisan seimbang untuk satu skim perumahan berdasarkan butir-butir berikut:-

Bil.	Aktiviti	Jam kerja/unit	Bilangan pekerja setiap aktiviti
1.	Asas	210	5
2.	Struktur	320	6
3.	Dinding	180	4
4.	Paip	80	3
5.	Elektrik	80	3
6.	Kemasan	160	6

JADUAL 1

- *bilangan unit rumah* = 100 unit
- *kadar output* = 3.5 unit seminggu
- *masa perantaraan* = 5 hari
- *masa kerja 8 jam sehari dan 6 hari seminggu*

(15 marks/markah)

7. (a) Using the information given in **Figure 1** and Table 2 below, draw a precedence diagram network and then fill up the boxes with the calculated values of early start time (EST), late start time (LST), early finish time (EFT), late finish time (LFT) and total float.

*Gunakan butir-butir yang diberi dalam **Rajah 1** dan Jadual 2 di bawah, lakarkan rangkaian rajah rentetan dan isikan dalam kotak-kotak tersebut dengan nilai-nilai yang dikira tersebut untuk masa mula awal (EST), masa mula akhir (LST), masa siap awal (EFT), masa siap akhir (LFT) dan jumlah apungan.*

(10 marks/markah)

- (b) 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 (EST) dan araskan semula sumber tersebut supaya mencapai pengagihan optimum.

(10 marks/markah)

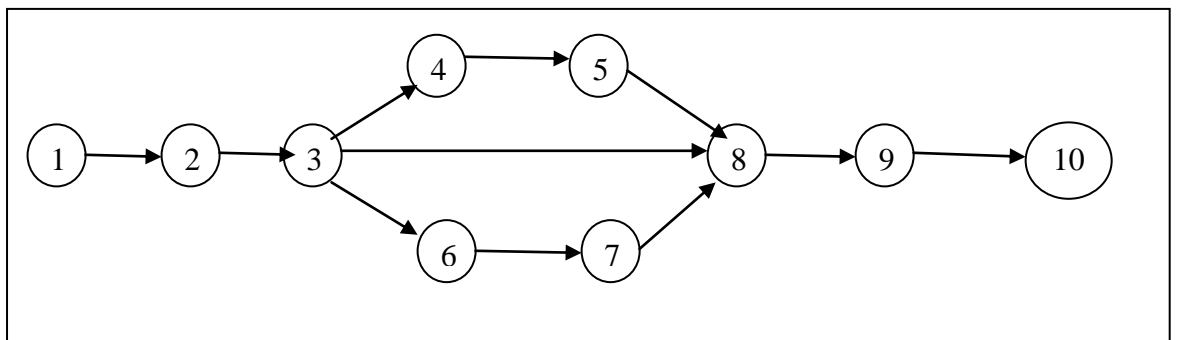


Figure 1 / Rajah 1

Activity number <i>Nombor aktiviti</i>	Activity duration <i>Jangka masa aktiviti</i>	Number of resources <i>Jumlah sumber</i>	Activities name <i>Nama aktiviti</i>
1	3	3	Site clearing <i>Bersih tapak</i>
2	7	4	Footing work <i>Kerja asas</i>
3	15	6	Structural work <i>Kerja struktur</i>
4	8	4	Wall <i>Dinding</i>
5	6	4	Doors and windows <i>Pintu dan tingkap</i>
6	6	4	Electrical work <i>Kerja elektrik</i>
7	6	4	Piping work <i>Kerja paip</i>
8	7	4	Roofing work <i>Kerja bumbung</i>
9	10	5	Finishing work <i>Kerja kemas</i>
10	4	4	External work <i>Kerja luar</i>

Table 2/Jadual 2