Universiti Tun Hussein Onn Malaysia

UNIVERSITI TUN HUSSEIN ONN MALAYSIA

FINAL EXAMINATION
SEMESTER II
SESSION 2013/2014

COURSE NAME	:	PROJECT MANAGEMENT
COURSE CODE	:	BIT 3043/ BIT 30403
PROGRAMME	:	3 BIT
EXAMINATION DATE	:	JUNE 2014
DURATION	:	3 HOURS
INSTRUCTION	:	ANSWER **ALL** QUESTIONS

THIS QUESTION PAPER CONSISTS OF **SEVEN (7)** PAGES

Q1 Figure **Q1** shows a case study.

Some influential stakeholders believe that by upgrading the software in this organization can save millions, while others feel that staying with the current software is the safest option, even though it is not meeting the current company needs. There are three possible methods: 1) buying the new software 2) building the new software in-house 3) stay with the current software. The following information is given.

- Build the new software: The associated cost is RM 500,000.
- Buy the new software: The associated cost is RM 750,000.
- Stay with the current software: The maintenance cost is RM 100, 000.
- The probability that building the new software unsuccessful is 40 percent.
- The probability that buying the new software successful is 95 percent.
- The probability that staying with the current software successful is 100 percent.
- If the deployment is successful then the impact is zero.
- If the deployment is unsuccessful, then the risk impact is RM 2 million.
- Staying with the current software will lead to one impact only, which is RM 2 million.

FIGURE Q1

(a) Construct a quantitative risk analysis by using a decision tree and Expected Monetary Value (EMV) technique.

(17 marks)

(b) Explain the conclusion that you can suggest to the stakeholder based on the answer in **Q1(a)**. Justify your decision for each method.

(6 marks)

Q2 Figure **Q2** shows an e-mentor project with activities W, X, Y, Z and its duration. Assume Activity W has 2 workers, X has 4 workers, Y has 2 workers and Z has 4 workers.

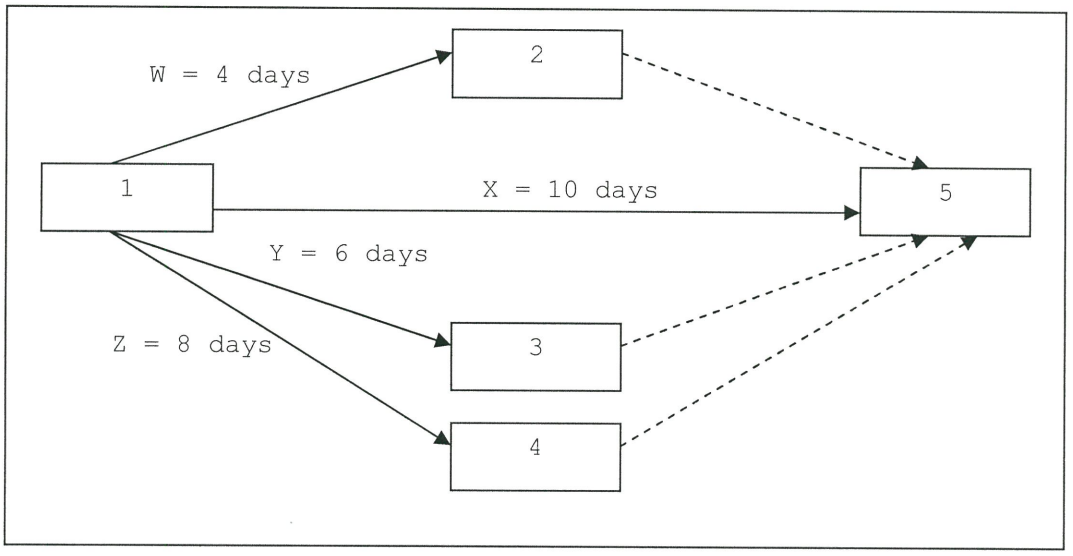

FIGURE Q2

(a) Illustrate a histogram of resource leveling for resource usage

(i) if all activities start on day one

(5 marks)

(ii) if activity Y is delayed 4 days

(5 marks)

(b) Based on the answer in **Q2(a)**, state your preferred histogram. Support your answer with **TWO (2)** reasons.

(3 marks)

Q3 Given the following scenario:

You are developing four modules for a system. You estimate each module has same difficulty, labour costs, and completion time. You also estimate that the project will take 4 months. The budget of RM4,000 includes contingency reserve. At the end of 3 months, you are asked to prepare an Earned Value calculation in order to determine how the project progress. You determine at the end of month 3, total costs incurred are RM3,500 and 70 percent of the project is completed.

(a) Calculate:

(i) Earned value

(2 marks)

(ii) Planned value

(2 marks)

(iii)Cost variance

(2 marks)

(iv)Schedule variance

(2 marks)

(v) Cost Performance Index

(2 marks)

(vi)Schedule performance index

(2 marks)

(b) If Estimated Cost at Completion (EAC) is RM5,000, calculate:

(i) Variance at Completion (VAC)

(2 marks)

(ii) Estimated Cost to Complete (ETC)

(2 marks)

(c) Based on the answer in **Q3(a)**, explain **ONE (1)** conclusion in term of

(i) Time

(2 marks)

(ii) Cost

(2 marks)

Q4 **Table 1** shows all the task of planning a custom-written system project.

Table 1: List of tasks

Task	Description	Earliest Start	Duration	Type	Dependent on
A	High level analysis	Week 0	1 Week	Sequential	
B	Selection of hardware platform	Week 1	1 day	Sequential	A
C	Installation and commissioning of hardware	Week 1,2	2 Weeks	Parallel	B
D	Detailed analysis of core modules	Week 1	2 Weeks	Sequential	B
E	Detailed analysis of supporting modules	Week 3	2 Weeks	Sequential	D
F	Programming of core modules	Week 3	2 Weeks	Sequential	D
G	Programming of supporting modules	Week 5	3 Weeks	Sequential	E
H	Quality assurance of core modules	Week 5	1 Week	Sequential	F
I	Quality assurance of supporting modules	Week 8	1 Week	Sequential	G
J	Core modules training	Week 6	1 day	Parallel	C, H
K	Development and QA of accounting reporting	Week 5	1 Week	Parallel	E
L	Development and QA of management reporting	Week 5	1 Week	Parallel	E
M	Development of Management Information System	Week 6	1 Week	Sequential	L
N	Detailed training	Week 9	1 Week	Sequential	I, J, K, M

(a) Create a network diagram for **Table 1**.

(14 marks)

(b) Identify the critical path in the answer of **Q4(a)**. Give **ONE (1)** reason.

(2 marks)

(c) Assume the start date of the project is 25th February 2013 and all day are working days. Determine the early start date, late start date, early finish date, late finish date for each task using Figure **Q4(c)**.

TASK	Early Start Date	Late Start Date	Early Finish Date	Late Finish Date
A				
B				
C				
D				
E				
F				
G				
H				
I				
J				
K				
L				
M				
N				

FIGURE Q4(c)

(28 marks)

-END OF QUESTIONS-

FINAL EXAMINATION

SEMESTER/SESSION: SEM II/2013/2014 PROGRAMME : 3 BIT
COURSE NAME : PROJECT MANAGEMENT COURSE CODE: BIT 3043 / BIT 30403

CALENDER 2 0 1 3

January

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

February

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	

March

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

April

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

May

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

June

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

July

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

August

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

September

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

October

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

November

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

December

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			