



UTHM

Universiti Tun Hussein Onn Malaysia

UNIVERSITI TUN HUSSEIN ONN MALAYSIA

**FINAL EXAMINATION
(ONLINE)
SEMESTER II
SESSION 2019/2020**

COURSE NAME : PROJECT MANAGEMENT
COURSE CODE : BIT 30403
PROGRAMME CODE : BIT
EXAMINATION DATE : JULY 2020
DURATION : 3 HOURS
INSTRUCTIONS : 1. ANSWER ALL QUESTIONS.
2. THE STUDENTS SHOULD UPLOAD THE ANSWER BOOKLET (PDF/WORD FORMAT) WITHIN 30 MINUTES AFTER EXAMINATION PERIOD.

THIS QUESTION PAPER CONSISTS OF FIVE (5) PAGES

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Q1 Based on **Table 1**, answer the following questions.

Table 1: List of task in development of verification system

Task	Predecessor	Optimistic Estimates (Days)	Most Likely Estimates (Days)	Pessimistic Estimates (Days)	No. of Staff	Cost. per day (RM)
A	None	2	3	6	4	3000
B	A	4	4	8	2	4000
C	A	3	6	8	4	4000
D	B, C	2	3	6	6	2000
E	B, D	1	2	4	4	1000
F	D, E	3	4	8	2	2000
G	C	3	3	6	4	2000
H	F, G	2	3	4	6	1000
I	F, H	4	6	8	2	1000
J	I	1	3	6	2	4000

(a) Determine expected duration in day for each activity using Program Evaluation and Review Technique (PERT).

(10 marks)

(b) Develop a network diagram using Activity on the Node (AON) technique based on the information in the **Table 1** and the answer in **Q1(a)**.

(4 marks)

(c) Determine the critical path.

(2 marks)

(d) Define the shortest possible time needed to complete this project.

(2 marks)

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(e) Answer **Q1(e)(i)-Q1(e)(iv)** based on the answer in **Q1(b)** and **Figure Q1**. Assume the start date of the project is 19 August 2019 and every Sunday is off days. Determine the early start date, late start date, early finish date, late finish date, slack/float for each of the following tasks.

(i) Task B (5 marks)

(ii) Task E (5 marks)

(iii) Task G (5 marks)

(iv) Task J (5 marks)

(f) Complete the summary of Project Performance Metrics in **Table 3** by using information given in **Table 1** and **Table 2**. (25 marks)

Table 2: Field Report at Day 10

Task	Actual % Complete	Incurred Cost (RM)
Start	-	-
A	100	16000
B	100	13000
C	60	15000
D	40	4000
E	40	1500
F	10	500
G	0	0
H	0	0
I	0	0
J	0	0
End	-	-

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Table 3: Project Performance Metrics

Task	Earned Value	Cost Variance	Schedule Variance	Cost Performance Index	Schedule Performance Index
A					
B					
C					
D					
E					
Cumulative					

- (g) Illustrate a histogram of resource loading for staff usage based on the information in **Table 1** and the answer in **Q31(b)**.
(5 marks)
- (h) Based on the answer in **Q1(g)**, propose a histogram of resource levelling for staff usage.
(5 marks)
- (i) Based on the answer in **Q1(h)**, determine the number of resources required through the project
(2 marks)

Q2 Jebat Bersatu Consultant Sdn Bhd need an equipment for a networking project that has a purchase price of RM 120,000.00. Assume it also had a daily operational cost of RM 4000.00. Suppose you could lease the same piece of equipment for RM 8000.00 per day, including the operational costs.

- (a) Set up Make-or-Buy Analysis to determine whether Jebat Bersatu Consultant Sdn Bhd should make the equipment inside the organization or buy it from someone else.
(3 marks)
- (b) What happen if Jebat Bersatu Consultant Sdn Bhd needs the equipment for “less than” and “more than” 30 days?
(2 marks)

-END OF QUESTIONS-

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FINAL EXAMINATION

SEMESTER/SESSION : SEM II/2019/2020
 COURSE NAME : PROJECT MANAGEMENT

PROGRAM: 3 BIT
 COURSE CODE: BIT 30403

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

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

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

FIGURE Q1

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