

UNIVERSITI TUN HUSSEIN ONN MALAYSIA

FINAL EXAMINATION SEMESTER I SESSION 2022/2023

COURSE NAME

: CONSTRUCTION PLANNING AND

SCHEDULING

COURSE CODE

: BFP40103

PROGRAMME CODE

: BFF

EXAMINATION DATE

TERBUKA

: FEBRUARY 2023

DURATION

: 3 HOURS

INSTRUCTION

: 1. ANSWER ALL QUESTIONS

2. THIS FINAL EXAM IS CONDUCTED

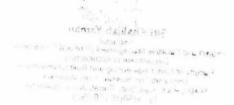
VIA CLOSED BOOK.

3. STUDENTS ARE PROHIBITED TO CONSULT THEIR OWN MATERIAL OR ANY EXTERNAL RESOURCES DURING THE EXAMINATION VIA

CLOSED BOOK



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- Q1 a) Table Q1 shows a list of activities for the construction of one structural element.

 Develop a network diagram based on the activities to identify the project's Early Start (ES), Early Finish (EF), Late Start (LS), Late Finish (LF), and critical path.

 (12 marks)
 - b) The project will begin on January 9th, 2023. Referring to the calendar in **Figure Q1** and the data in **Table Q1**;
 - (i) Estimate the planned finish date.

(2 marks)

(ii) Develop the planned actual S-Curve.

(8 marks)

(iii) Assess the project status on 18th January 2023 if the earned value of the date is RM 28,000.

(8 marks)

Q2 A contractor is required to complete a project with the activities listed in **Table Q2**. Allocate the required manpower, then manually level so that the contractor does not use more than six (6) manpower at any time.

(10 marks)

Q3 The client has requested you to renovate his home. However, he requests that you complete the work in 23 weeks, and he is willing to pay the extra cost. You must propose crashing activities and provide an estimate of the costs involved. **Table Q3** displays the work information.

(12 marks)

Q4 a) Planning is the most important aspect of project management. Elaborate three (3) planning outputs.

(6 marks)

b) Project monitoring is a method of measuring the performance of a construction project. Discuss three (3) objectives in establishing a successful project monitoring and control system.

(9 marks)

-END OF QUESTION-



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Table Q1

			Actual start date	Actual	Planned	Actual
Activity	Duration (days)	Successor		finish	cost	cost
				date	(RM)	(RM)
Α	2	B,D	9 Jan 23	11 Jan 23	2,000	3,000
В	2	C,E	12 Jan 23	14 Jan 23	4,000	6,500
С	2	F	16 Jan 23	18 Jan 23	3,200	5,000
D	4	E,G	12 Jan 23	17 Jan 23	8,000	10,000
Е	4	F,H	18 Jan 23	25 Jan 23	4,000	5,000
F	4	I	26 Jan 23	31 Jan 23	1,600	2,000
G	2	Н			3,000	
Н	2	I			6,000	
I	2	J			5,000	
J	9	5 — 8			18,000	

		Ja	nuary 20		Stratic No.		
Sun	Mon	Tue	Wed	Thur	Fri	Sat	
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					
		Fe	l bruary 20)23		1	
Sun	Mon	Tue	Wed	Thur	Fri	Sat	
			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					
	Non-working day						
	Working day						

Figure Q2

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Table O2

Activity	Duration (days)	Successor	Manpower/ day
Start		A, B	
A	5	C, D	2
В	7	D	4
С	3	Е	3
D	5	Е	3
Е	2	Finish	2
Finish			

Table O3

Activity	Duration (weeks)	Predecessor	Normal Cost (RM)	Crash Cost (RM)	Normal Duration (days)	Crash Duration (days)
A	3	-	5,000	7,000	3	2
В	6	A	8,000	16,000	6	4
C	10	A	6,000	9,000	10	9
D	11	A	5,000	15,000	11	7
Е	8	В	10,000	16,000	8	6
F	5	C,D	4,000	7,000	5	4
G	6	E,F	7,000	7,000	6	6

