



UTHM

Universiti Tun Hussein Onn Malaysia

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	: 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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THIS QUESTION PAPER CONSISTS OF **FOUR (4)** PAGES

- 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 Q2

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

Table Q3

Activity	Duration (weeks)	Predecessor	Normal Cost (RM)	Crash Cost (RM)	Normal Duration (days)	Crash Duration (days)
A	3	-	5,000	7,000	3	2
B	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
E	8	B	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

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