
UNIVERSITI SAINS MALAYSIA

1st Semester Examination
2004/2005 Academic Session

October 2004

EAA 483/2 - CONSTRUCTION MANAGEMENT

Duration : 2 hours

Instructions to candidates:

1. Ensure that this paper contains **THREE (3)** printed pages include appendices.
2. This paper contains **FIVE (5)** questions. Answer **FOUR (4)** questions only. Marks will be given to the **FIRST FOUR (4)** questions put in order on the answer script and **NOT** the **BEST FOUR (4)**.
3. All questions carry the equal marks.
4. All questions **MUST BE** answered in Bahasa Malaysia.
5. Write answered question numbers on the cover sheet of the answer script.

1. Rapid development of Construction Industry in this country results into preparation of Contract Document becoming so important to all respective parties in this industry particularly Civil Engineer. Therefore, clear understanding of different types of contract is required for the preparation of the Tender Document.
 - (a) Describe in details four (4) types of contract which normally being used in Malaysia.

(15 marks)
 - (b) Discuss the element that should be taken into consideration while preparing Tender Document and lists the main item in the Tender Document.

(10 marks)

2. The management of construction contract should include all important aspects to ensure that project can be successfully completed within time and budget allocated. Describe in details **FOUR (4)** out of six (6) topics stated below which relate to the contract management:-
 - (a) Life-cycle of a construction project starting from feasibility study.
 - (b) The factors that should be considered in tender valuation/assessment.
 - (c) The different type of bid that is normally practice in this country.
 - (d) Certificate of delay and extension of contract period.
 - (e) The responsibilities and job tasks of a Superintendent Officer.
 - (f) Instruction of contract variation.

(25 marks)

3. Discuss the relevant aspects of analytical phase (known also as evaluation phase or investigation phase) in value engineering. The discussion should include the following:
 - i. objective
 - ii. principal tasks
 - iii. the item for considering the (economic) worth
 - iv. method of evaluation

(25 marks)

4. (a) Discuss the following concept in quality assurance:
 - i. elements of quality
 - ii. the quality system

(12 marks)
 - (b) Discuss the guideline and program in the implementation of health and safety aspect in construction industry.

(13 marks)

5. (a) Describe the following terms that were used in the critical path method (CPM).

- i. Earliest start-time
- ii. Latest start-time
- iii. Total float
- iv. Free float

(5 marks)

(b) Table 1.0 shows the list of activities in a construction project, their dependence with other activities and the duration needed to complete each activity. Based on Table 1.0, draw:

- i. Bar chart or Gantt chart
- ii. Critical Path Method (CPM) diagram

(5 marks)

for the activities in the construction project. Subsequently, for each activity, compute:

- i. Earliest start-times
- ii. Latest start-times
- iii. Total float
- iv. Free float

Indicate the critical activities.

(15 marks)

Table 1.0

Aktivitiy	Dependece	Duration (weeks)
A	-	7
B	-	7
C	-	9
D	A	4
E	A	5
F	B, E	6
G	B	3
H	C	8
I	G, H	7
J	F, I	11
K	D	13
L	J	2
M	C	14