UNIVERSITY OF BOLTON

SCHOOL OF ENGINEERING

BSC (HONS) CONSTRUCTION MANAGEMENT

SEMESTER ONE EXAMINATION 2018/2019

CONSTRUCTION MANAGEMENT C

MODULE NO: CAS6002

Date: Tuesday 15th January 2018   **Time: 14:00 – 17:00**

INSTRUCTIONS TO CANDIDATES: There are **SIX** questions.

Answer **FOUR** questions.

All questions carry equal marks

Marks for parts of questions are shown in brackets.

This examination paper carries a total of 100 marks.

All working must be shown.
A numerical solution to a question obtained by programming an electronic calculator will not be accepted.

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1. Critically appraise whether construction companies may achieve optimum profitability whilst simultaneously pursuing a commitment to best practice in health and safety.

(25 marks)

2. You have secured a job as a Construction Site Manager with a small medium sized company. The contract you have been assigned is working for a local high school to create ten new class rooms using off site methods of construction as well as refurbishing a further ten existing classrooms and various corridors. The contract is fast track starting in late June completion for September 2019. Critically appraise and contextualise the various leadership styles you could adopt to ensure the contract runs smoothly on time and to budget.

(25 marks)

3. The Joiners working on the second fix refurbishment part of a contract are not performing and this part of the contract is behind schedule. They seem to be very demotivated and have no sense of urgency to get the job done. Discuss the various motivational theories that could be employed to address the situation.

(25 marks)

4. Evaluate a range of issues in the literature in 2018 that are likely to be predictors of performance in the construction industry in 2019 and beyond.

(25 marks)

5. Discuss to what extent the ethos of the Considerate Constructors Scheme supports the Corporate Social Responsibility of construction companies.

(25 marks)

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6. Table 1 details some construction activities labelled A to P. Costs are given for 'normal', and 'crash' durations. Draw the arrow diagram for the normal duration and calculate the cost. Calculate the earliest start, earliest finish, latest start, latest finish and float for each activity. Crash the programme and calculate the cost for successive one day savings in duration, upto and including the minimum project duration. Calculate the total crash cost.

State all assumptions used in the analysis.

Table 1

Activity	Predecessor	Normal duration		Crash duration	
		Time days	Cost £s	Time days	Cost £s
A	I	6	3 500	-	-
B	A	3	2 800	2	4 500
C	A	3	2 000	-	-
D	B and C	4	4 000	3	9 000
E	B	4	10 500	3	12 000
				2	15 000
F	B	7	7 000	6	8 000
				4	10 500
G	F	5	10 500	-	-
H	E	8	3 500	5	5 000
I	-	5	2 000	4	4 000
				3	7 000
J	A	10	4 000	-	-
K	H	5	3 500	4	4 000
				2	8 000
L	G	3	6 000	-	-
M	L and K	6	4 000	4	5 000
N	D	10	8 000	-	-
O	M and N	7	10 000	-	-
P	J and O	10	5 000	5	7 500

(25 marks)

END OF QUESTIONS