

UNIVERSITY OF BOLTON
SCHOOL OF ENGINEERING
BENG (HONS) CIVIL ENGINEERING
SEMESTER 1 EXAMINATION 2019/2020
CONSTRUCTION MANAGEMENT
MODULE NO: CIE6007

Date: Friday 17th January 2020

Time: 10:00am – 1:00pm

INSTRUCTIONS TO CANDIDATES:

There are SIX questions.

Answer ANY 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. Appraise how the construction industry could be categorised and characterised. Discuss how the categorisation/characterisations you have appraised, fit with an example project of your choice.

(25 marks)

2. Examine some likely causes of insolvency in the construction industry and discuss how the industry could reduce risks effectively.

(25 marks)

3. As part of the ambitions to support new approaches to procurement, the NEC4 family of contracts has incorporated information modelling into the secondary clauses. Critically appraise the elements considered and how this might be implemented on contemporary contracts.

(25 marks)

4. On a construction site, the Construction Manager is one of the key professionals in place to drive authority/leadership/management. Within the ethics of the profession, provide critical advice on management/leadership styles and elements a construction manager may adopt to achieve success with the construction team.

(25 marks)

5. Critically discuss why it is essential to ensure optimum health and safety on construction projects and appraise how to achieve this on site.

(25 marks)

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6.

(a). A subcontractor submits an invoice of £200,000 and takes the payment 2 months earlier than its due date. If the due period is 120 days, based on an interest rate of 4% calculate the 'discount' or 'charge' on the subcontractor for withdrawing the cash early and the resulting amount collected by the subcontractor.

(8 marks)

(b). A job needs to be completed in 2 months; payments are made on a monthly basis and 30 days after receipt of invoices. A tier 2 supplier estimates that £250,000 (including profit) will actually do the job and bids for it to a tier 1 contractor.

- i. Determine the net amount for the tier 2 supplier if 10% profit is allowed.
- ii. Calculate all payments to be made to the tier 2 supplier, assuming retention is 5%, half of that amount is released on practical completion of the whole work, and the other half is released six months later. Assume 60% of the work is completed at the end of month 1.
- iii. Determine the amount payable if a discount of 5% on the gross price is negotiated.
- iv. Assuming, 1 month into commencement of the job, the tier 2 supplier is losing money and realises the agreed price is too low. Briefly discuss how the matter may be resolved.

(12 marks)

(c) Briefly justify the usefulness of retention on construction contracts.

(5 marks)

Total 25 marks

END OF QUESTIONS

END OF PAPER