



**CEX7109 – Management of the Design Phase & Quality Control**

*FINAL EXAMINATION – 2012/2013*

Time Allowed: Three Hours

Date: 2013 - 08 - 10 (Saturday)

Time: 0930 - 1230 hrs

Answer four (4) questions, selecting at least one (1) question from section B.

**Section A**

**Q1.**

- (a). List and briefly describe the core phases of design activity. (12 marks)
- (b). Discuss the key points client need to consider in preparing a good client's brief. (13 marks)

**Q2.**

- (a). Discuss the influence of decisions taken at various stages of a design project on the project cost. (8 marks)
- (b). Explain briefly what you understand by comparative cost planning and discuss with examples how it could be used in the design phase of a project. (9 marks)
- (c). Explain what you understand by 'life cycle costing'. (8 marks)

**Q3.**

- (a). Describe what is meant by a 'consultant agreement' and state reasons why such agreements are necessary. (8 marks)
- (b). Discuss briefly the advantages gained by registration of contractors by an authorized agency. (8 marks)
- (c). Grading and registration of government contractors in Sri Lanka is done by ICTAD. Describe the guidelines currently used by ICTAD to register and grade contractors. (9 marks)

**Q4.**

- (a). In the case of tenders called by public advertisement, advertisements shall be placed in appropriate newspapers. Describe the general information contained in such an advertisement. Illustrate your answer by preparing a sample advertisement for a bridge project. (10 marks)
- (b). Describe the procedure to be followed in issuing amendments to tender documents. (8 marks)
- (c). Describe briefly the factors to be considered by the 'tender evaluation committee' in evaluating tenders. (7 marks)



## Section B

Q5.

- (a). Describe the benefits a company can enjoy by obtaining ISO 9000 certification. (9 marks)
- (b). An ISO certified company should have a written method for controlling documents that relate to the quality system. Describe the two important aspects of controlling documents. (8 marks)
- (c). Briefly explain the purpose of 'internal quality audits' in an ISO 9000 quality management system. (8 marks)

Q6.

- (a). Describe how a contractor would minimize the effects of following factors on the quality of construction work. Illustrate your answers with suitable examples.
- (i). Unrealistic time constraints. (3 marks)
  - (ii). Poor communication. (3 marks)
  - (iii). Poor quality labour. (3 marks)
- (b). Discuss briefly in relation to construction projects, citing an example you have faced, the need for 'product identification and traceability'. (7 marks)
- (c). Identify the three site inspection and testing procedures used to control quality of construction works giving an example each in relation to use of concrete. (9 marks)

