



CEX7109 - Management of the Design Phase & Quality Control

FINAL EXAMINATION - 2016/2017

Time Allowed: **Three Hours**

Date: 2017 - 11 - 27 (Monday)

Time: 0930 - 1230 hrs.

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

Section A

Q1.

- (a). The project brief is the key document upon which the design will be based. Describe key elements to be considered in a project brief. (08 marks)
- (b). Design Management is an increasingly important function in the construction industry. Briefly Describe six core phases of design activity. (09 marks)
- (c). Explain what do you understand by "The Conceptual Design". Briefly describe the approaches of Conceptual phase. (08 marks)

Q2.

- (a). Describe what "Project Management" means and three key elements of project management. (08 marks)
- (b). What are the main objectives of cost planning? Explain the process of elemental cost planning. (09 marks)
- (c). Explain what do you understand by "life cycle costing". Discuss the importance of life cycle costing giving examples. (08 marks)

Q3.

- (a). An agreement between Client and Consultant sets down the services required by the client. Why is it necessary to sign a "Consultancy Agreement" between the Client and the Consulting Engineer? (08 marks)
- (b). The International Federation of Consulting Engineers (commonly known as FIDIC) is an international standards organization for the consulting engineering & construction. Describe the contents of a FIDIC model consultancy agreement. (10 marks)
- (c). Explain what do you understand by the "design freeze" and "change management". (07 marks)



Q4.

- (a). Discuss the Purpose and benefits of CIDA (previously ICTAD) registration gained by the client and the contractors. (8 marks)
- (b). Tendering is the process by which bids are invited from interested contractors. Discuss the three ways in which tenders for construction projects are carried out in Sri Lanka giving examples. (9 marks)
- (c). A "Tender Evaluation Committee - TEC" is appointed when calling tenders to carry out government contracts. Explain the duties of the TEC. (8 marks)

Section B

Q5.

- (a). ISO 9000 is a set of international standards on quality management and quality assurance developed to help companies effectively document the quality system elements to be implemented to maintain an efficient quality system. Describe this giving the main points of ISO 9000 standard. (10 marks)
- (b). The Quality Manual is the first level of documentation in a Quality Management System. Briefly describe key elements to be included in a quality manual. (08 marks)
- (c). Inspection checklists and various tests on materials and completed works form the site inspection and testing procedures. Prepare a check list to ensure the quality of ready mixed concrete during the receiving, in-process and final inspection and testing stages. (07 marks)

Q6.

- (a). Explain three ways of managing quality in a construction project giving examples. (09 marks)
- (b). Briefly describe the difference between 'quality control' and 'quality assurance' in construction work. (07marks)
- (c). If you are recruited as a quality assurance manager in a five star hotel project, what would be your roles and Responsibilities. (09 marks)

