



CEX7109 - Management of the Design Phase & Quality Control

FINAL EXAMINATION - 2013/2014

Time Allowed: Three Hours

Date: 2014 - 08 - 23 (Saturday)

Time: 0930 - 1230 hrs

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

Section A

Q1.

- (a). The needs of clients can be separated into three distinct categories namely time, cost and quality requirements and a right balance among the three categories should be achieved to get optimum results. Describe how you would propose to achieve this in your client's brief assuming you, as the client, wishing to construct a five star tourist hotel. (13 marks)

- (b). Discuss why conceptual phase of the design activity is very critical and illustrate your answer with an example. (12 marks)

Q2.

- (a). Quantity surveyor plays a key role as a member of the development team. Explain the different roles a quantity surveyor needs to fulfil through various stages of design activity. (8 marks)

- (b). "Decisions taken at earlier stages have the greatest influence on any project". Discuss this with respect to a "design project". (9 marks)

- (c). A mathematical model can be developed to predict the cost of a project based on data available for similar projects completed earlier. Indicate how elemental cost targets can be used to predict cost of projects giving an example. (8 marks)

Q3.

- (a). Illustrate graphically and explain how life cycle costs for a typical building project are distributed over the development and operational phases. (10 marks)

- (b). Discuss why consultancy agreements are necessary. Enumerate and describe the contents of a FIDIC model consultancy agreement. (15 marks)

Q4.

- (a). The process of registration of contractors help both contractors and clients in numerous ways. Discuss the advantages gained by contractors and clients separately through this process. (10 marks)

- (b). Tenders for construction projects are invited in three different ways. List and describe those. (8 marks)



- (c). List five different types of documents included under “tender documents” issued to contractors with a description of each. (7 marks)

Section B

Q5.

- (a). State what “quality management” means and describe the three ways of managing quality. (9 marks)
- (b). Management of an ISO certified company is responsible to take certain actions to ensure that the company follows required steps to maintain quality. State the actions management is responsible for. (8 marks)
- (c). “Records of actions taken according to the quality plan ensures that specified procedures are followed”. Illustrate this point by describing the types of records an ISO certified company need to maintain. (8 marks)

Q6.

- (a). 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. (7 marks)
- (b). “Non conformances” can be dealt with in three different ways. Discuss your answer with respect to a situation where crushing strength results indicated that the ready mixed concrete used to pour columns of a reinforced concrete building has not reached the required characteristic strength. (11 marks)