

## Exam Questions for November 2019

### CONTRACTS AND COMMERCIAL PRACTICE

**ANSWER ONLY 1 OF THE QUESTIONS. You are allowed 4 attachments. 1 must be the front cover sheet.**

**Q1)**

**Refer to your drawings and scenario**

The project is constrained on all boundaries by existing housing, shops, commercial development, and a children's playground, none of which can be taken out of use before or during the construction phase.

The constrained nature the project site will require the design team to consider what form of construction is most appropriate to accord with the client's budget and programme.

The project is being executed under a design and build form of contract.

**TASK:** As the Contractor's Project Manager, you have been asked to produce a report setting out the possible alternative forms of construction, comparing and contrasting the relative cost and programme implications and relative procurement risks of these.

**N.B. You must state the precise form of contract you have chosen for the project**

(30 Marks)

**OR**

**Q2)**

**Refer to your drawings and scenario**

Concerns have arisen about the performance of the integrated chilled service beams during the final stages of commissioning. The client has contracted to possession dates with tenants for several areas of the building and is finalising the letting arrangements for the remaining areas.

The project is being executed under a design and build form of contract.

**TASK:** Discuss the options that the client's representative may use to resolve these concerns.

**N.B. You must state the precise form of contract you have chosen for the project.**

(30 Marks)

## **MANAGEMENT**

**ANSWER ONLY 1 QUESTION. You are allowed 4 attachments. 1 must be the front cover sheet.**

**Q1)**

**Refer to your drawings and scenario**

Part way through the project it is evident that the productivity of operatives has reduced with low morale, reported sickness and increased absenteeism.

**TASK:** As the Contractor's Project Manager, produce a strategy to maintain and preferably increase levels of productivity during the construction phase of the development.

(30 Marks)

**OR**

**Q2**

**Refer to your drawings and scenario**

**TASK:**

- A) Prepare a construction programme for the development up to and including first floor level, giving reasons for the planning technique used.

(15 Marks)

- B) The construction of the retail units has fallen behind programme resulting in a delay of their phased handover. Explain how forensic delay analysis might be used on the development to ascertain reasons for the delay.

(15 Marks)

## **HEALTH, SAFETY AND THE ENVIRONMENT**

### **ANSWER ONLY 1 QUESTION**

**You are allowed 4 attachments. 1 must be the front cover sheet.**

#### **Q1**

##### **Refer to your drawings and scenario**

The project is constrained on all boundaries by existing housing, shops, commercial development, and a children's playground, none of which can be taken out of use before or during the construction phase. There are likely to be many cyclists, walkers and young children in the area.

**TASK:** As the Contractor's Project Manager, produce a traffic management plan for the duration of the project ensuring it meets air pollution, noise and traffic safety in accordance with legislation.

(30 Marks)

## **OR**

#### **Q 2**

##### **Refer to your drawings and scenario**

The project is constrained on all boundaries by existing housing, shops, commercial development, and a children's playground, none of which can be taken out of use before or during the construction phase.

During the excavation works a large volume of groundwater is encountered.

In addition, the concrete work will produce a considerable amount of wash-water from truck mixers. A surface water sewer discharging to a nearby river and a foul sewer are both located nearby.

**TASK:** As the Contractor's Project Manager, produce a Risk Assessment outlining the disposal options associated with the management of this large volume of water to ensure compliance with environmental legislation.

(30 Marks)

## **CONSTRUCTION TECHNOLOGY**

### **ANSWER ONLY 1 QUESTION**

**You are allowed 6 attachments. 1 must be the front cover sheet.**

#### **Q1**

**Refer to your drawings and scenario**

**TASK:** Prepare an illustrated technical report that describes the active and passive fire precautions that would be appropriate for the project.

(30 Marks)

#### **OR**

#### **Q 2**

**Refer to the drawings and scenario**

**TASK:** As a Designer at the pre-construction phase, produce an illustrated technical report for the contractor outlining options for the envelope of the building which would optimise its energy efficiency.

(30 Marks)