

# Examiners' Report June 2010

## Principal Learning

### Construction and the Built Environment CB304 Create the Built Environment: Health, Safety and Environmental Influences

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# Principal Examiner's Report

## Principal Learning - Construction and the Built Environment

### Level 3 Unit 4 - Create the Built Environment: Health, Safety and Environmental Influences

#### Question 1

The majority of learners provided two appropriate descriptions of the benefits of using wind turbines as a source of energy for a new building. The correct responses were mainly focussed on a reduction in CO<sub>2</sub> emissions, a free source of energy, a reduction in dependence on fossil fuels and surplus power sold to the 'grid'. Some learners correctly identified appropriate benefits but failed to provide a description that did not attract any marks. A few learners did not read the question correctly and provided general benefits of renewable fuels not related to wind turbines.

#### Question 2

Learners did not provide appropriate situations that constituted a confined space for construction operations, and the majority of the responses focussed on hazards associated with a lack of working space for operatives. Some learners correctly described hazards associated with a build up of dust, lack of oxygen and entrapment when working in trenches during the construction process; however they failed to develop their answers into a clear description.

#### Question 3

This question was generally well answered with the majority of learners identifying the correct provision and use of personal protective equipment (PPE) or, the need to provide training for site operatives. However many responses incorrectly focussed on the use, control or removal of asbestos on-site, which is not a requirement within the COSHH Regulations.

#### Question 4

The majority of learners provided two appropriate descriptions of the environmental impact of sourcing materials from outside the United Kingdom. The correct responses were mainly focussed on emissions from transport, deforestation or embodied energy. Some learners correctly identified appropriate impacts, but did not provide an explanation so did not attract any marks.

#### Question 5

The majority of learners correctly identified appropriate processes for ensuring good sustainability design; including the type of alternative energy used for the building, locally sourced materials and modern methods of construction. However, many descriptions were basic and not clear reducing the marks awarded. A few learners did not read the question correctly and focussed their answer on sustainable design related to the construction process rather than a construction project, for example, wind turbines to generate electricity for the 'site huts'.

### Question 6

- (a) This part of the question was incorrectly answered by the majority of learners who generally described the use of metal pins, positioned either through or adjacent to the foundation to prevent it moving. Very few learners provided a clear description of the use of underpinning.
- (b) The majority of learners did not attempt this part of the question, and very few provided an appropriate response. The drawings produced by the majority of learners were very basic and not cross-sectional, and very few provided any relevant annotation.

### Question 7

The majority of learners correctly provided a simple description of costs incurred by the contractor of not complying with legislation. The responses focussed on fines imposed by the Health and Safety Executive, and compensation for injuries to operatives during the construction process. Some learners provided more detailed descriptions of how the costs could be incurred due to lost production or legal costs. A few learners did not read the question correctly and focussed their answer on costs in terms of damage to the environment.

### Question 8

- (a) The majority of learners provided a simple explanation of the term life cycle costing, identifying maintenance and fuel as the main ongoing costs. However few learners explained that it included all costs from purchase to demolition.
- (b) The majority of learners identified maintenance and energy as types of life cycle cost; however the majority of descriptions were basic and not detailed reducing the marks awarded.

### Question 9

- (a) The majority of learners were able to identify appropriate physical factors to be included within the Health and Safety Plan, including safety barriers and Personal Protective Equipment. However few provided an adequate description and very few provided any analysis required to achieve high marks. Also, many responses generally did not relate to the office development scenario and tended to be general construction related responses.
- (b) Learners generally provided simple descriptions of the duties of the Principal Contractor under the Construction Design and Management Regulations, which included providing information, preventing unauthorised access and co-operating with other contractors. However the majority of responses lacked clarity and the descriptions required more detail to gain the higher marks. Also many responses generally did not relate to the office development scenario and tended to be general construction related responses.

## Question 10

The response for this question required description and analysis within a structured report. The majority of the learners provided poorly structured reports with no introduction or conclusion, and with a main content consisting of brief descriptions or lists of unrelated benefits and disadvantages, not related to the scenario. A few learners provided their responses using a good structured format and included sound descriptions and analysis and a conclusion based on the evidence produced within the body of the report.



## Statistics

### Level 3 Unit 4 Create the Built Environment: Health, Safety and Environmental Influences

Grade	Max Mark	A*	A	B	C	D	E
Raw boundary mark	60	51	45	39	33	27	22
Points score	14	12	10	8	6	4	2

#### Notes

**Maximum Mark (raw):** the mark corresponding to the sum total of the marks shown on the Mark Scheme or Marking Grids.

**Raw boundary mark:** the minimum mark required by a learner to qualify for a given grade.

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