

SPECIMEN PAPER

UNIT 4 - CREATE THE BUILT ENVIRONMENT: HEALTH, SAFETY AND ENVIRONMENTAL INFLUENCES



Centre Number						Candidate Number				
Surname										
Other Names										
Candidate Signature										

For Examiner's Use	
Examiner's Initials	
Question	Mark
1	
2	
3	
4	
5	
6	
7	
8	
TOTAL	



Level 3 Diploma Principal Learning
Specimen Paper

Construction and the Built Environment

CBE3U4

Unit 4 Create the built environment: health, safety and environmental influences

Date Time

For this paper you must have:

- A pen, a pencil, an eraser and a pencil sharpener

Time allowed

- 2 hours

Instructions

- Use black ink or black ball-point pen.
- Fill in the boxes at the top of this page.
- Answer **all** questions.
- You must answer questions in the spaces provided. Answers written in margins or on blank pages will not be marked.
- Do all rough work in the book. Cross through any work you do not want to be marked.

Information

- The maximum mark for this paper is 60.
- The marks for questions are shown in brackets.
- You are reminded of the need for good English and clear presentation in your answers.



ENG3U4

Answer **all** the questions.

Planning permission has been given to build a new extension to an existing office block and to upgrade several of the existing offices. Work on the office block involves construction of a three-storey extension using portal frames. The elevations of the new extension are in conventional precast units on concrete floors which support large triple glazed sealed units. Internally several existing large rooms are being partitioned into smaller units using studwork and medium density fibreboard (MDF) sheeting.

A Principal Contractor has been appointed by the client to oversee the contract which comes within the scope of the CDM Regulations. There are sub-contracts let for groundwork/superstructure, building services and internal re-fitting work.

The site is located adjacent to busy roads and public footways.

Questions 1 to 8 relate to the above scenario.

2 There is a contractual requirement for a site specific Health & Safety plan.

2 (a) Identify who is responsible for producing this Health & Safety plan.

.....
.....

(1 mark)

2 (b) Identify **three** Health & Safety headings or issues that should be included in the plan.

.....
.....
.....
.....
.....
.....

(3 marks)

2 (c) Describe **two** different hazards that might cause harm on the site.

.....
.....
.....
.....

(2 marks)

3 Insert into the table below the two hazards identified in 2(c) above and complete the risk assessment form to show who is at risk from the hazard, and how the risks will be controlled.

Hazard	At risk	Controls/Safe methods
1.		
2.		

(6 marks)

4 Explain the contribution made to effective health and safety on the site by the following:

4 (a) Safe use of appropriate Personal Protective Equipment (PPE)

.....

.....

.....

.....

(2 marks)

4 (b) Clear and informative signage on site

.....

.....

.....

.....

(2 marks)

4 (c) Workplace health and safety inductions for all staff

.....

.....

.....

.....

(2 marks)

5 A pipe layer has been crushed and killed by a fall of earth while working in a 4m deep trench on the site. The Health and Safety Executive (HSE) have investigated the incident and are now inspecting the site to decide if work can recommence, after the required improvements to on-site health and safety practices have been made. They are using a checklist that includes the two questions below. Analyse what is being asked in both questions and justify any required improvements.

5 (a) Is there adequate support for the excavation, or has it been sloped or battered back to a safe angle?

.....

.....

.....

.....

.....

.....

(3 marks)

5 (b) Are materials, spoil and plant stored away from the edge of the excavation to reduce the chance of another collapse?

.....

.....

.....

.....

.....

.....

(3 marks)

6 Outline the roles and responsibilities of the following under the Construction Design and Management Regulations 2007:

6 (a) HSE

.....
.....
.....
.....

(2 marks)

6 (b) CDM Coordinator

.....
.....
.....
.....

(2 marks)

6 (c) Principal Contractor

.....
.....
.....
.....

(2 marks)

7 The table below shows statistics for fatal accidents in the construction and built environment sector broken down by site activity from 1999/00 to 2004/05.

Site activity	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05
Refurbishment, repair and maintenance	46	43	45	34	39	32
New build	21	37	12	15	20	24
Road works, civil engineering and demolition	14	25	23	21	12	15
Total	81	105	80	70	71	71

Analyse the statistics provided and comment upon:

7 (a) the overall trend in the industry over the six year period

.....

.....

.....

.....

(2 marks)

7 (b) the form of site activity, and the year, where the greatest reduction in the number of fatal accidents was recorded

.....

.....

.....

.....

(2 marks)

7 (c) a possible reason for the high number of fatal activities in refurbishment, repair and maintenance projects

.....
.....
.....
.....

(2 marks)

7 (d) the human cost of fatal accidents

.....
.....

(1 mark)

7 (e) the financial costs of fatal accidents

.....
.....

(1 mark)

7 (f) **one** other possible consequence of fatal accidents to be considered

.....
.....

(1 mark)

