

## SPECIMEN PAPER

## UNIT 1 - DESIGN THE BUILT ENVIRONMENT: DESIGN FACTORS



|                     |  |  |  |  |  |                  |  |  |  |  |
|---------------------|--|--|--|--|--|------------------|--|--|--|--|
| Centre Number       |  |  |  |  |  | Candidate Number |  |  |  |  |
| Surname             |  |  |  |  |  |                  |  |  |  |  |
| Other Names         |  |  |  |  |  |                  |  |  |  |  |
| Candidate Signature |  |  |  |  |  |                  |  |  |  |  |



Level 3 Diploma Principal Learning  
Specimen Paper

# Construction and the Built Environment

## CBE3U1

### Unit 1 Design the built environment: design factors

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.

|                     |      |
|---------------------|------|
| For Examiner's Use  |      |
| Examiner's Initials |      |
| Question            | Mark |
| 1                   |      |
| 2                   |      |
| 3                   |      |
| 4                   |      |
| 5                   |      |
| 6                   |      |
| 7                   |      |
| 8                   |      |
| 9                   |      |
| 10                  |      |
| TOTAL               |      |



**ENG3U1**

Answer **all** the questions.

**1** Identify three types of natural stone used in buildings in the United Kingdom and explain why they have been used in walls and roofs.

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*(6 marks)*

**2** Describe improvements in fire safety in buildings, with reference to historical fire tragedies and technical innovation.

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*(6 marks)*

**3** In 1857 the first passenger elevator was installed in a building in New York by the Otis Elevator Company. Describe the effect this innovation has had on building design around the world.

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*(6 marks)*

**4** Describe the built environment features of proposed **eco-towns**.

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*(8 marks)*

**5** Describe the important effects of an economic recession upon the building industry.

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*(8 marks)*

**6** (a) Explain the meaning of the following terms as they relate to architectural drawings.

**6** (a) (i) hatching

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**6** (a) (ii) scale

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**6** (a) (iii) title block

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**6** (a) (iv) vertical section

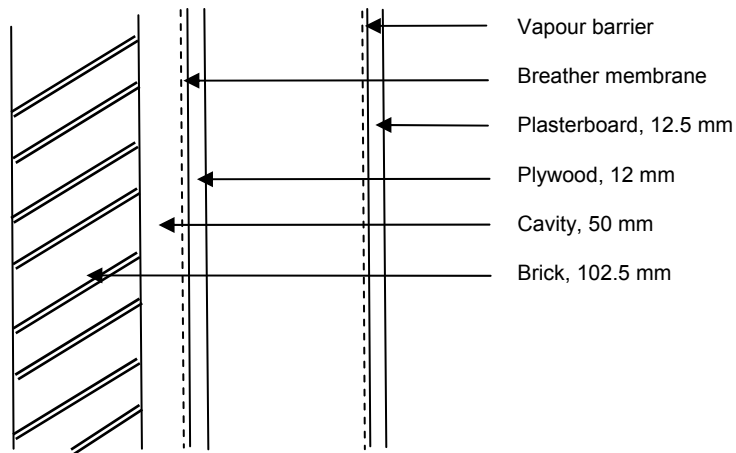
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*(4 marks)*

- 6 (b) **Figure 1** shows a detail of an external wall to a timber-framed house construction, but with no thermal insulation shown. Describe where the insulation should be placed in the wall and explain why it is needed.

**Figure 1**



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(4 marks)

- 7 Describe an **advantage** and **disadvantage** against the construction of a new by-pass to a town or a village.

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(4 marks)

8 Describe the methods used by architects and engineers to give disabled people safe and easy access into and around buildings.

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(4 marks)

9 A Sustainable Urban Drainage System (SUDS) is a built environment flood prevention initiative.

Explain this statement.

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(4 marks)

10 Explain what is meant by the phrase **form** and **function** as it relates to building design.

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(6 marks)

**END OF QUESTIONS**