

Write your name here

Surname					Other names				
Centre Number					Learner Registration Number				
Pearson BTEC Level 1/Level 2 First Award									

# Construction and the Built Environment

## Unit 1: Construction Technology

Friday 15 May 2015 – Morning <b>Time: 1 hour</b>	Paper Reference <b>21492E</b>
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<b>You do not need any other materials.</b>	Total Marks
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### Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and learner registration number.
- Answer **all** questions.
- Answer the questions in the spaces provided  
– *there may be more space than you need.*

### Information

- The total mark for this paper is 50.
- The marks for **each** question are shown in brackets  
– *use this as a guide as to how much time to spend on each question.*

### Advice

- Read each question carefully before you start to answer it.
- Try to answer every question.
- Check your answers if you have time at the end.

Turn over ►

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**Answer ALL questions.**

**Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.**

**Answer ALL Questions.**

**1** Identify **two** preconstruction site set-up activities.

- A** Permanent control of sub-soil water
- B** Installation of site accommodation
- C** Gates and security of the site
- D** Dry lining onto stud walls
- E** Fixing battens to roof

**(Total for Question 1 = 2 marks)**

**2** (a) Identify **two** purposes of thermal insulation in a building.

**(2)**

1 .....

.....

2 .....

.....

(b) Identify **two** locations where sound insulation may be installed in a building.

**(2)**

1 .....

.....

2 .....

.....



(c) Identify **two** materials or components that are used to achieve weather resistance in buildings.

(2)

- A** Mineral wool
- B** Plasterboard
- C** Waste pipe
- D** Flashings
- E** Double glazing

(d) Give **two** design features that will reduce the spread of fire in a building.

(2)

1 .....

.....

2 .....

.....

(e) Identify **two** types of load that buildings are designed to resist.

(2)

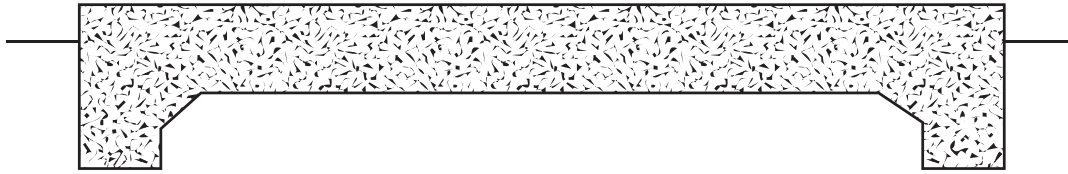
- A** Snow
- B** Strength
- C** Stability
- D** Self-weight
- E** Sustainability

**(Total for Question 2 = 10 marks)**

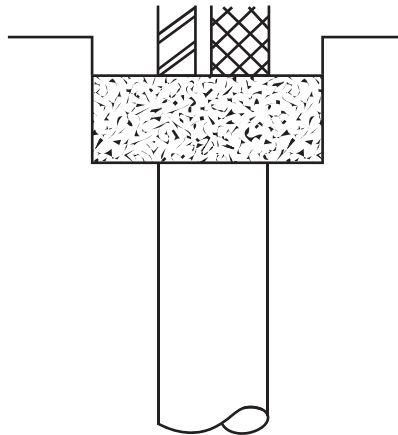


3 (a) Name the **three** types of foundation.

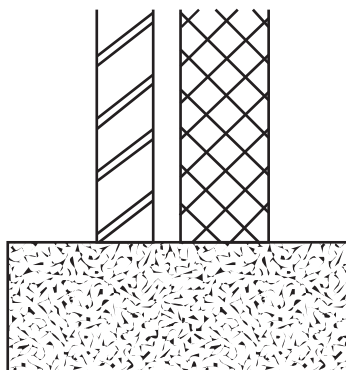
(3)



(i) .....



(ii) .....



(iii) .....



(b) Explain **one** advantage and **one** disadvantage of a trench/mass fill concrete foundation.

(4)

Advantage

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.....

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Disadvantage

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**(Total for Question 3 = 7 marks)**



4 Diagram 1 shows a window head detail.

Label the components of the window head detail.

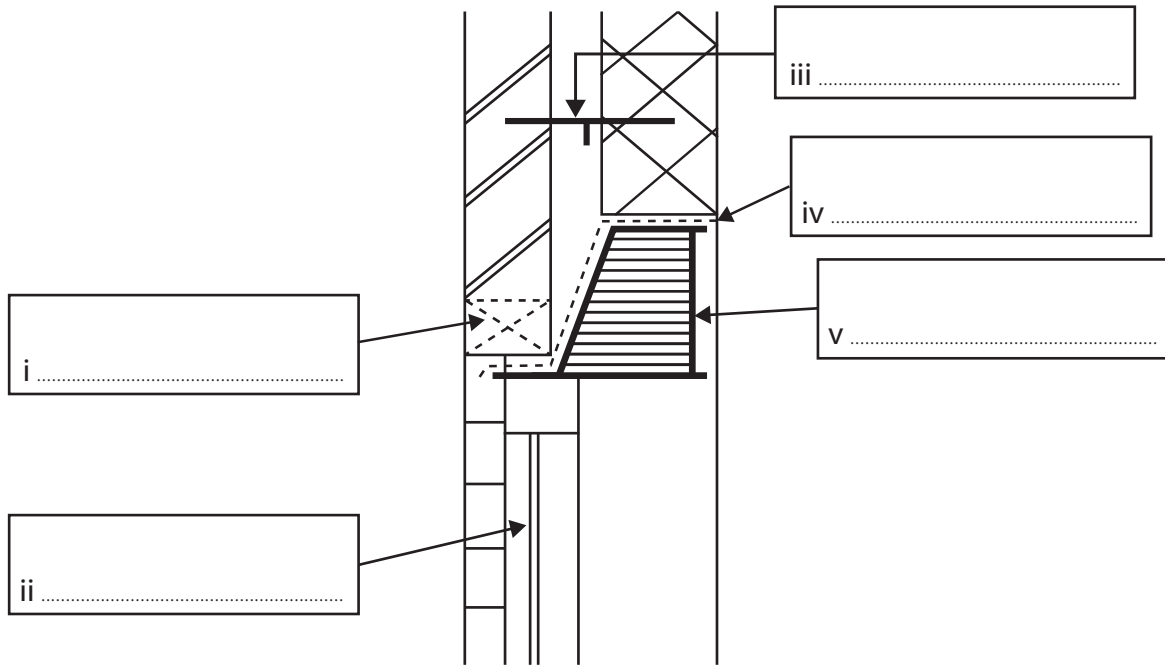


Diagram 1

(Total for Question 4 = 5 marks)



5 Sketch a cross-section through an external wall of a timber-framed building.  
You should annotate your diagram.

**(Total for Question 5 = 5 marks)**



6 (a) State **one** function of a roof.

(1)

.....

.....

(b) Identify **two** components used in the construction of roofs.

(2)

- A** Cavity tray
- B** Wall plate
- C** Hemp rendering
- D** Aluminium walling
- E** Jack rafter

**(Total for Question 6 = 3 marks)**

7 Explain **two** advantages of using a solid ground floor instead of a suspended timber ground floor in a house.

1 .....

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2 .....

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**(Total for Question 7 = 4 marks)**





8 Explain **one** way in which on-site construction wastage can be reduced.

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**(Total for Question 8 = 2 marks)**

9 Explain **two** reasons why internal partition walls are often constructed using softwood.

1 .....

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2 .....

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**(Total for Question 9 = 4 marks)**





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