



General Certificate of Secondary Education
January 2013

Centre Number

71

Candidate Number

Construction and the Built Environment

Assessment Unit 1: The Construction Industry for the 21st Century

[GCB11]



WEDNESDAY 9 JANUARY, AFTERNOON

TIME

1 hour 30 minutes.

INSTRUCTIONS TO CANDIDATES

Write your Centre Number and Candidate Number in the spaces provided at the top of this page.

Write your answers in the spaces provided in this question paper. Answer **all ten** questions.

Questions 1, 2, 3, 7 and 9 should be answered in relation to the enclosed house drawings and specifications previously issued as pre-release material.

You should not bring any of the material previously issued into this examination.

You will be provided with a clean copy of the pre-release material.

INFORMATION FOR CANDIDATES

The total mark for this paper is 120.

Figures in brackets printed down the right-hand side of pages indicate the marks awarded to each question or part question.

Quality of written communication will be assessed in Questions **8** and **10**.

A scale rule is required.

For Examiner's
use only

| Question Number | Marks |
|-----------------|-------|
| 1 | |
| 2 | |
| 3 | |
| 4 | |
| 5 | |
| 6 | |
| 7 | |
| 8 | |
| 9 | |
| 10 | |

Total
Marks

| |
|--|
| |
|--|

Section A
Answer **all** questions

| Examiner Only | |
|---------------|--------|
| Marks | Remark |
| | |

Use the pre-release material to assist with answering questions 1, 2, 3, 7 and 9.

- 1 (a) What is the name given to the type of roof construction used in the dwelling shown in the pre-release material?
- _____ [1]
- (b) List below the type of material from which each of the following building elements is made.
1. Roof covering _____ [1]
2. Quoin stones _____ [1]
3. Roof flashing _____ [1]
4. Chimney pots _____ [1]
- (c) The dwelling shown in the pre-release material has load bearing external walls.
1. What is the correct name for this type of wall construction?
- _____ construction [1]
2. Give the names of **four suitable raw materials** from which these walls are constructed.
- _____ [1]
- _____ [1]
- _____ [1]
- _____ [1]

- 2 The type of roof construction used in the house shown in the pre-release material is a timber cut roof which can accommodate rooms in the roof space.

Clearly state what you understand by the following **six** items that could be used in the house construction shown in the pre-release material. State what their **function is** and **where they would be located** within the roof.

1. Roofing membrane or roofing felt

 [2]

2. Fascia board

 [2]

3. Hangers

 [2]

4. Eaves

 [2]

5. Valley

 [2]

6. Gutter

 [2]

| Examiner Only | |
|---------------|--------|
| Marks | Remark |
| | |

4 (a) What does the abbreviation COSHH stand for?

C _____ of S _____

H _____ to H _____ [3]

(b) What do the following **three** symbols identify as being a hazard under the COSHH regulations?



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_____ [1]



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_____ [1]



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_____ [1]

| Examiner Only | |
|---------------|--------|
| Marks | Remark |
| | |

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(Questions continue overleaf)

6 Place the correct title from the list below with its matching image:

- Farm building
- Landscaped area
- Steel framed rectangular structure
- Timber framed structure
- Modern terraced housing
- Concrete bridge over a motorway
- Portal Framed Structure
- Cellular Construction



1. _____ [1]



2. _____ [1]



3. _____ [1]

| Examiner Only | |
|---------------|--------|
| Marks | Remark |
| | |

- 7 (a) List **six** of the main functions of the external wall construction used in the house shown in the pre-release material.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____ [6]

- (b) Fig. 1 shows a section through a cavity wall with wall ties joining the two skins together.



Fig. 1

What is the correct spacing of these wall ties?

Horizontal spacing _____ mm [1]

Vertical spacing _____ mm [1]

Vertical spacing at door and window openings _____ mm [1]

- (c) List **one** material from which wall ties could be made.

_____ [1]

| Examiner Only | |
|---------------|--------|
| Marks | Remark |
| | |

9 Fig. 2 below shows an incomplete sill detail which is to be used for the house shown in the pre-release material.

Complete the drawing and include labels from the list below:

- | | |
|--------------------------|--------------------------|
| Concrete sill | Outer skin of block work |
| Inner skin of block work | Anti-capillary groove |
| Damp Proof course | Timber window frame |
| Insulation behind sill | Double glazing |
| Cavity Insulation | Sill board |

10 marks for labels and 10 for drawings.

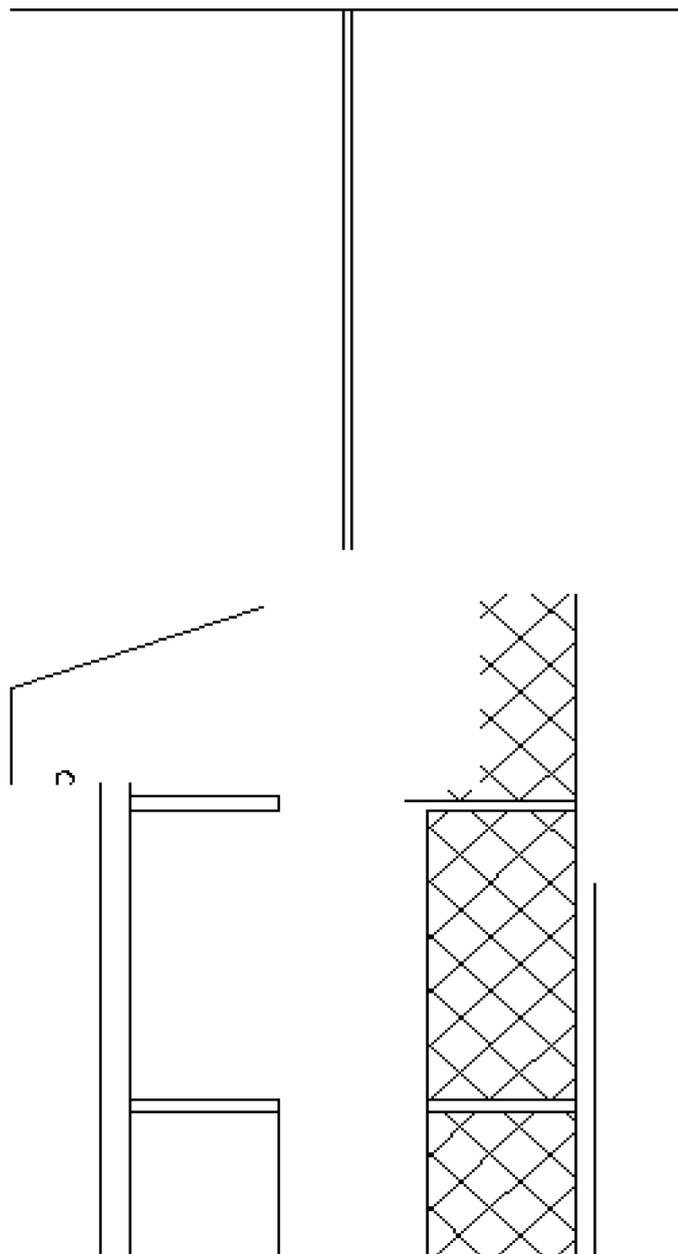


Fig. 2

[10]

[10]

| Examiner Only | |
|---------------|--------|
| Marks | Remark |
| | |

THIS IS THE END OF THE QUESTION PAPER

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