



General Certificate of Secondary Education
2019

Centre Number

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Candidate Number

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Construction and the Built Environment

Unit 1
Introduction to the Built Environment



GCN11

[GCN11]

THURSDAY 30 MAY, AFTERNOON

TIME

1 hour.

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 seven** questions.

INFORMATION FOR CANDIDATES

The total mark for this paper is 80.

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 **4(c)** and **7(b)**.

| For Examiner's use only | |
|-------------------------|-------|
| Question Number | Marks |
| 1 | |
| 2 | |
| 3 | |
| 4 | |
| 5 | |
| 6 | |
| 7 | |

| | |
|--------------------|--|
| Total Marks | |
|--------------------|--|

Answer **all** questions

- 1 List **three** of the **main roles** that the following construction employees would have when working on a construction site containing 48 houses and 12 apartments. The total cost of the construction project is 7 million pounds. The houses are constructed using cavity wall construction with an outer skin of red facing brick. Reinforced concrete heads are used on the inner skin with galvanised steel lintels on the outer skin.

(a) **Site manager**

1. _____
2. _____
3. _____ [3]

(b) **Bricklayer**

1. _____
2. _____
3. _____ [3]

(c) **Plumber**

1. _____
2. _____
3. _____ [3]

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

- 2 Residential accommodation requires many different types of buildings that must be specifically designed to meet the client's brief.

Identify the types of residential accommodation shown in this question and briefly state the distinguishing characteristics of each.



Fig. 1

- (a) 1. The type of dwellings shown in **Fig. 1** are:

_____ [1]

2. **Two** distinguishing characteristics of this type of dwelling are:

 _____ [2]

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



Fig. 2

(b) 1. The type of dwellings shown in **Fig. 2** are:

_____ [1]

2. **Two** distinguishing characteristics of this type of dwelling are:

 _____ [2]

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

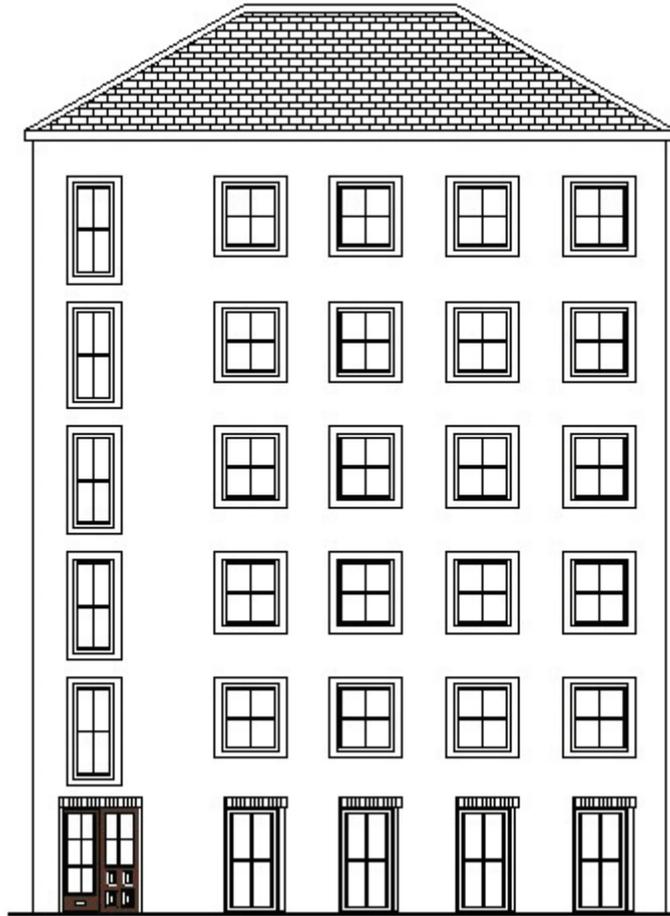


Fig. 3

- (c) 1. The type of residential accommodation shown in **Fig. 3** is:

_____ [1]

2. **Two** distinguishing characteristics of this type of accommodation are:

_____ [2]

Examiner Only

Marks

Remark

3 What do the letters **COSHH** stand for?

Complete the blanks below to show your understanding.

(a) **C** _____ of **S** _____ **H** _____ to
H _____ [4]

(b) List **three** of the most common risks on construction sites that can result in fatal accidents.

1. _____ [1]

2. _____ [1]

3. _____ [1]

(c) Under The Health and Safety at Work (Northern Ireland) Order 1978 describe **four duties** of the **employee** on any construction site.

1. _____ [1]

2. _____ [1]

3. _____ [1]

4. _____ [1]

(d) Welfare facilities must be provided by an employer to ensure a safe and healthy workplace. List **three** examples:

1. _____ [1]

2. _____ [1]

3. _____ [1]

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

4 Fig. 5 shows a sectional view for a Portal Framed Structure to be used for a farm building.

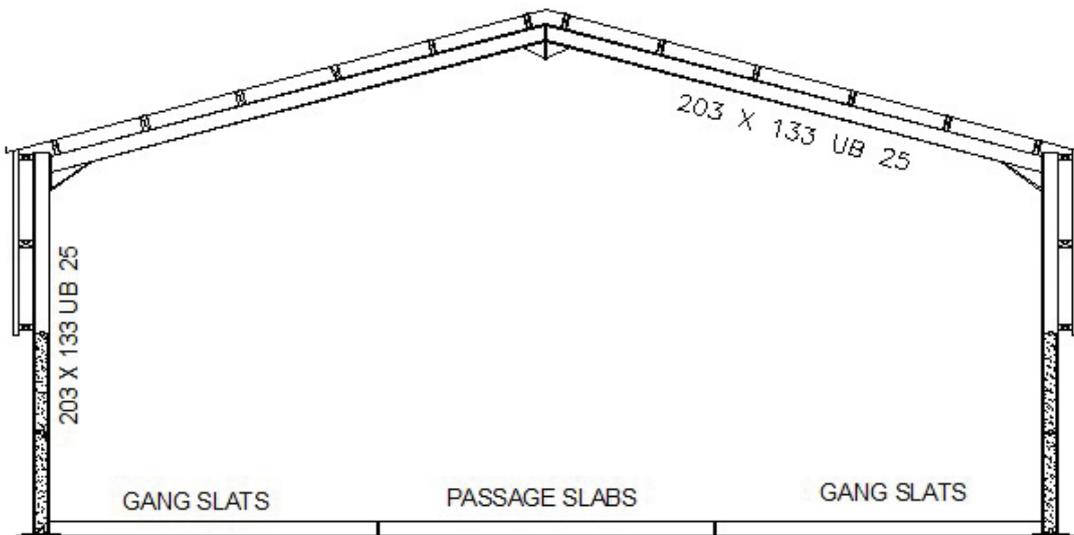


Fig. 5

(a) Other than steel, name **two** common materials from which a Portal Frame is normally manufactured.

1. _____ [1]

2. _____ [1]

(b) List the **two** most common methods used to join a steel framed structure.

1. _____ [1]

2. _____ [1]

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

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(Questions continue overleaf)

7 Timber framed construction is commonly used as a modern method of construction for social, semi-detached domestic housing in the United Kingdom. Much emphasis is put on the thermal insulation of such properties as enforced by the Building Regulations.

(a) Describe the term Platform Frame as used in timber framed construction.

[2]

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|---------------|--------|
| Marks | Remark |
| | |

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