



General Certificate of Secondary Education

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

Assessment

TIME

1 hour.

Assessment Level of Control:
Tick the relevant box (✓)

Controlled Conditions	
Other	

INSTRUCTIONS TO CANDIDATES

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

You must answer the questions in the spaces provided.

Do not write outside the boxed area on each page or on blank pages.

Complete in black ink only. **Do not write with a gel pen.**

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 question **6(c)**.



Answer **all** questions

1 The construction industry consists of three main activities, namely building, civil engineering and building services. These activities are responsible for employing technical, managerial and professional occupations.

(a) Give a local example from Northern Ireland of each of the main activities.

1. **Building**

_____ [1]

2. **Civil Engineering**

_____ [1]

3. **Building Services**

_____ [1]



(b) State **three** roles of each occupation listed below. These professionals will be responsible for the three main activities.

1. Architect

(i) _____ [1]

(ii) _____ [1]

(iii) _____ [1]

2. Civil Engineer

(i) _____ [1]

(ii) _____ [1]

(iii) _____ [1]

3. Building Services Engineer

(i) _____ [1]

(ii) _____ [1]

(iii) _____ [1]

[Turn over



2 Electricity is very dangerous and can cause fatalities or start fires. Each year around seven people are killed by electrocution. It is very important that all power tools are safe to use.

Explain **three** checks that should be carried out on construction sites before using power tools.

1. _____

_____ [2]

2. _____

_____ [2]

3. _____

_____ [2]





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20GCN1105

- 3 **Fig. 1** shows a three-dimensional view of a basic structure commonly used in the construction process.

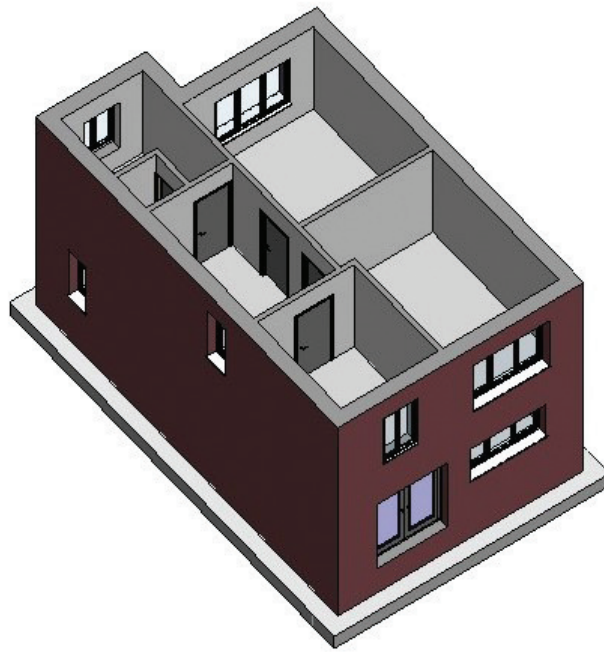


Fig. 1

- (a) Name the type of structure shown in **Fig. 1**.

_____ [1]

- (b) **Three** distinguishing characteristics of this type of structure are:

(i) _____ [1]

(ii) _____ [1]

(iii) _____ [1]



(c) List three common materials from which the structure is normally constructed.

(i) _____ [1]

(ii) _____ [1]

(iii) _____ [1]

(d) Explain how structural stability is achieved in this form of structure.

[2]

[Turn over



(e) Fig. 1 was produced using building information modelling (BIM) compliant software. Explain **two** of the main roles of the **BIM co-ordinator**.

1. _____

_____ [2]

2. _____

_____ [2]





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4 The Royal Institute of British Architects Plan of Work 2013 (RIBA POW) simplifies the complete construction cycle into eight practicable stages.

Describe **two** things that occur at each of the following stages of this cycle.

(i) Strategic Definition

[4]

(ii) Construction

[4]



(iii) Handover and Close Out

[4]

[Turn over



5 Softwood and hardwood are commonly used materials in the roof structure and joinery components.

(a) Name **three** common softwoods.

(i) _____ [1]

(ii) _____ [1]

(iii) _____ [1]

(b) Explain what is meant by the term softwood.

_____ [3]

(c) State **two** uses of softwood.

(i) _____ [1]

(ii) _____ [1]



(d) Name **three** common hardwoods.

(i) _____ [1]

(ii) _____ [1]

(iii) _____ [1]

(e) Explain what is meant by the term hardwood.

_____ [3]

(f) State **two** uses of hardwood.

(i) _____ [1]

(ii) _____ [1]

[Turn over



6 Insulation is commonly used in the construction of domestic projects.

(a) Define the term insulation.

[2]

(b) List **three** materials used for insulation.

(i) _____ [1]

(ii) _____ [1]

(iii) _____ [1]





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Question Number	Marks
1	
2	
3	
4	
5	
6	
7	

Total Marks	
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Examiner Number

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