



**6720-504 MARCH 2018**

**Level 2 Technical Award in Designing and Planning the Built Environment**

Level 2 Designing and Planning the Built Environment – Theory exam

If provided, stick your candidate barcode label here.

**Friday 23 March 2018**  
**09:30 – 11:30**

Candidate name (first, last)

First

Last

Candidate enrolment number

Date of birth (DDMMYYYY)

Gender (M/F)

Assessment date (DDMMYYYY)

Centre number

Candidate signature and declaration\*

• If any additional answer sheets are used, enter the additional number of pages in this box.

• Please ensure that you **staple** additional answer sheets to the **back** of this answer booklet, clearly labelling them with your full name, enrolment number, centre number and qualification number in BLOCK CAPITALS.

• All candidates need to use a **black/blue pen**. **Do not** use a pencil or gel pen.

• If provided with source documents, these documents **will not** be returned to City & Guilds, and will be shredded. **Do not** write on the source documents.

**\*I declare that I had no prior knowledge of the questions in this assessment and that I will not divulge to any person any information about the questions.**

**You should have the following for this examination**

- a pen with blue or black ink
- a calculator

**General instructions**

**This question paper is the property of City and Guilds of London and should be returned after the examination.**

- This examination contains 12 questions. Answer **all** questions.
  - Answer the questions in the space provided.
  - The marks for each question are shown in brackets.

2nd PROOF

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DATE

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COMMENTS

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PASSED

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SIGNED .....



- 1 Identify **three** areas of the property market supported by the construction and built environment sector. (3 marks)

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- 2 State **three** advantages of public housing. (3 marks)

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- 3 Explain why the development of sustainable communities should include planning for open spaces. (3 marks)

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4 Explain the importance of public transport systems within sustainable communities. (4 marks)

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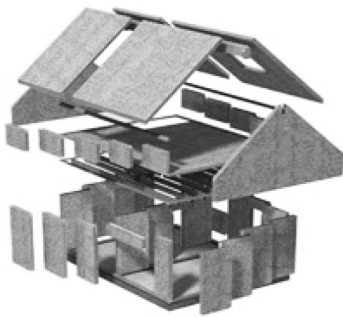
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5 Identify the **three** modern forms of construction labelled a), b) and c) in Figure 1. (3 marks)



a)



b)



c)

**Figure 1**

a) \_\_\_\_\_

b) \_\_\_\_\_

c) \_\_\_\_\_

6 Identify the type of material deterioration labelled a), b), c) and d) in Figure 2.

(4 marks)



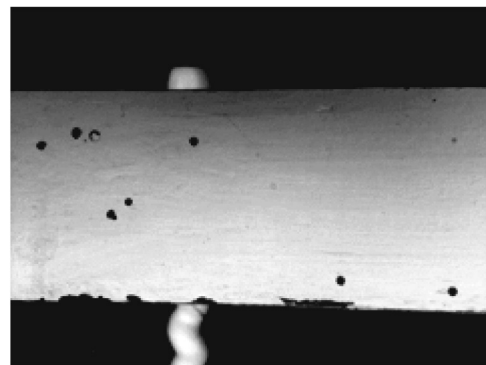
a)



b)



c)



d)

**Figure 2**

- a) \_\_\_\_\_
- b) \_\_\_\_\_
- c) \_\_\_\_\_
- d) \_\_\_\_\_

7 Describe how the following factors affect the design of the built environment.

a) Community needs. (2 marks)

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b) Aesthetics. (2 marks)

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c) Infrastructure requirements. (2 marks)

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d) Environmental issues. (2 marks)

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8 Explain the difference between concept drawings and detailed working drawings used in construction design and planning. (4 marks)

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9 Explain how the following are used in building design.

a) Building Regulations Approved Documents. (3 marks)

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b) Building Information Modelling (BIM). (3 marks)

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10 a) Name **three** different types of drawings prepared by designers. (3 marks)

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b) Describe what is meant by the term 'annotation' as applied to construction drawings. (2 marks)

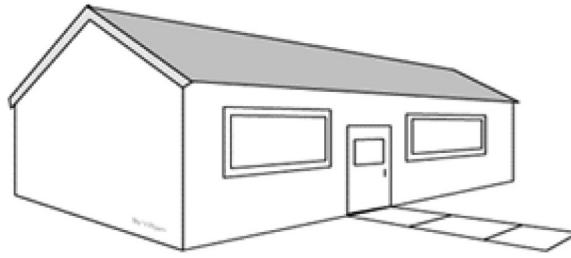
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- 11 The building shown in Figure 3 has dimensions on plan of 9 m x 5 m. The front and back walls are 4 m high and the gable end walls are 6 m high at the ridge. The gable walls are symmetrical.



**Figure 3**

Determine the:

- a) area of gable end wall (2 marks)
- b) area of front and back walls (2 marks)
- c) internal volume of the building (2 marks)
- d) total surface area of the walls. (2 marks)

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12 A property developer has purchased a small disused airfield where the hangars are currently used for storing grain. Modern housing estates have grown up around the airfield over the last two decades. The developer wants to demolish the hangovers and build 100 houses and two medium-rise apartment blocks on the site. The local authority is not convinced that more speculative housing is what the area needs and are looking for something more 'community-friendly'.

You have been asked to communicate with the local authority to obtain planning permission for an alternative development. The developer will have to consider the design factors to be taken into account in any new proposal and will need to present another planning application.

Discuss a new proposal that the developer could successfully present to the local authority.

(9 marks)

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