



6720-546 MARCH 2018

Level 3 Advanced Technical Extended Diploma in Constructing the Built Environment (Construction) (720)

Level 3 Constructing 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 non-programmable 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 **16** questions. Answer **all** questions.
 - Answer the questions in the space provided.
 - The marks for each question are shown in brackets.
- Show **all** calculations.



1 Identify **two** methods used to prepare bills of quantities. (2 marks)

2 State the appropriate unit of measurement for:
a) steel reinforcement (1 mark)

b) light fittings. (1 mark)

3 Define the following terms as used in tendering and estimating:
a) Profit. (2 marks)

b) Overheads. (2 marks)

4 Explain why the 'superficial' method would be used, rather than the 'approximate quantities' method, when estimating at an early stage of a project. (5 marks)



5 A team of ground workers pour 150 m³ of concrete in 8 hours.
The job was priced to take 10 hours. The rate of pay is £60/hour for the team.

a) Determine the total pay the team will receive. (3 marks)

b) Determine the effective hourly rate. (2 marks)

6 Identify **two** types of building obsolescence. (2 marks)

7 a) Identify one part of a roof that should be inspected in a condition survey. (1 mark)

b) Describe a typical defect associated with this roof part and the consequences of that defect. (2 marks)

8 Name **three** different pieces of non-planning legislation that could impact a conversion project. (3 marks)



9 Explain why a designer may choose to undertake façade retention on a conversion project.

(3 marks)

10 Explain why a contractor might choose to undertake a temporary repair.

(3 marks)

11 Summarise the factors to be considered when converting store rooms above a shop for conversion into a flat.

(4 marks)

- 12 State the areas covered by the following approved documents:
- a) Approved Document P. (1 mark)

 - b) Approved Document Q. (1 mark)

 - c) Approved Document R. (1 mark)

13 Describe how a SWMP is used on modern construction sites. (2 marks)

14 Summarise the development of building regulations following The Great Fire of London in 1666. (3 marks)

15 Explain how Approved Document M1 ensures a materially altered dwelling is accessible for all potential users.

(4 marks)

16 Your client has acquired an old chapel on the edge of town and is looking to convert and extend it to create a new 4 bedroomed house. The chapel is constructed from solid stone with a slate covered pitched roof, on timber queen post trusses. It has ill-fitting single glazed metal windows and a solid timber door. The chapel is single-storey, however there is scope for a mezzanine level along its full length. There are mains electrical services direct to the building, but no other mains services on to the site. The nearest water and drainage provision is approximately 200 metres from the site boundary. The client's main concerns are ensuring works are completed to budget, that companies can tender successfully and that the important design considerations will comply with all building regulations.

Discuss the main considerations in respect of the client's specific concerns.

(12 marks)
