6720-502 JUNE 2018
Level 2 Technical Award in Constructing and Maintaining the Built Environment
Level 2 – Constructing and Maintaining the Built Environment – Theory exam

If provided, stick your candidate barcode label here.

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 20 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 the area of the construction industry in which bridges and roads are designed and constructed. (1 mark)

2. Describe the purpose of the planning diagram shown in Figure 1. (2 marks)

![Diagram](image)

**Figure 1**

3. Explain why clients' representatives should attend formal site meetings with the contractor. (3 marks)

4. Name the type of drainage that uses land drains. (1 mark)
5 State two benefits of using a cavity wall, rather than a solid wall construction method. (2 marks)

6 a) Describe what is meant by ‘fixtures and fittings’. (2 marks)

b) Give one example of a
   i) fixture
   ii) fitting. (2 marks)

7 a) State two material properties that make masonry suitable for domestic construction. (2 marks)

b) State one performance in use of expanded polystyrene. (1 mark)
The diagrams in Figure 2 show two common forms of domestic ground floor construction.

Explain why a designer might specify a suspended timber ground floor, rather than the more common solid concrete ground floor, for a modern domestic property. (4 marks)
9. In terms of application and maintenance, compare the following internal wall finishes for a bathroom. 
   - Gypsum plaster.
   - Ceramic wall tiles.

10. It has been calculated that it will take exactly 1740 bricks to repair a damaged wall. 
    Why should the buyer order 2000 bricks? 

11. A building has been badly damaged by water over the years and requires refurbishment. 
    Identify three tasks that could be undertaken to make the property more waterproof.
12 Name one part of the superstructure that must be inspected in a condition survey. (1 mark)

13 a) Name one building service that must be carried out by a competent and qualified person. (1 mark)

b) List one check that a competent and qualified person is required to carry out. (1 mark)

14 An excavator removes 64 m$^3$ of soil from a trench. The soil bulked by 35% on removal from the ground. The bulk density of the soil is 1800 kg/m$^3$. The soil was loaded on to tipper-trucks with a capacity of 20 tonnes.

Determine how many trucks were needed.

You must show all your working out. (3 marks)

15 Explain why a client may request a condition survey when purchasing a domestic property. (3 marks)
16 Name the construction or building service trades that carry out each of the activities in Figure 3. (3 marks)

![Figure 3](image)

a)  

b)  

c)  

17 Describe the purpose of barrier cream for personal protection when working on a building site. (2 marks)

18 a) What does ‘CDM’ stand for in ‘CDM Regulations’? (1 mark)

b) State two of the main purposes of the CDM Regulations. (2 marks)
19 Explain how the job of a site carpenter differs from that of a bench joiner. (5 marks)

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20 A detached house is being extended to provide a porch at the front, an integral garage with access from the rear on the ground floor and two bedrooms above the garage. Figure 4 below shows the building at a point during the construction stage.

*Figure 4*

Discuss the factors that should have been considered before commencing construction. (9 marks)

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