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City & Guilds

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.

Friday 22 June 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. ➡ 0 0
- 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 & Guilds Limited 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.

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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)

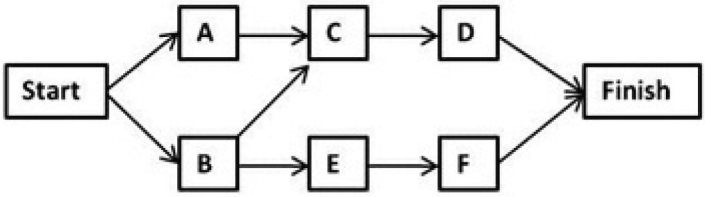


Figure 1

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)

See next page

8 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)

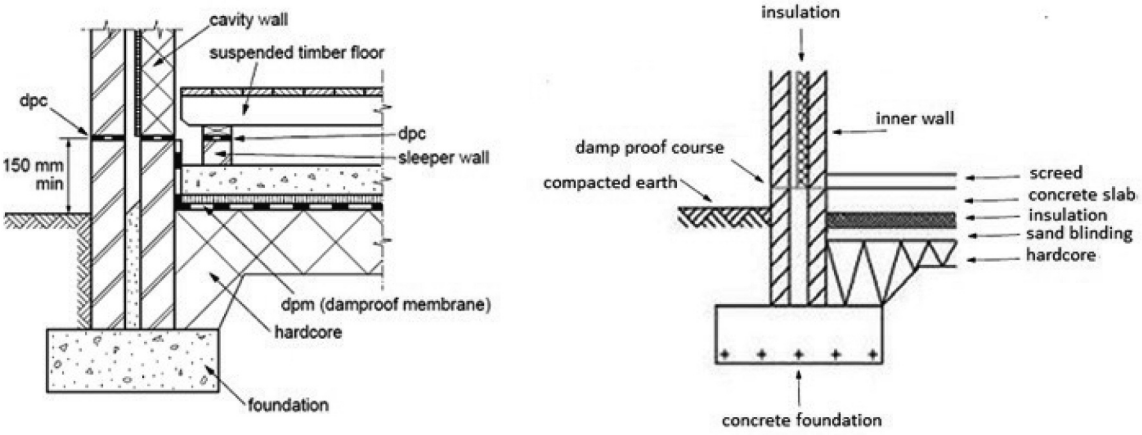


Figure 2

9 In terms of application and maintenance, compare the following internal wall finishes for a bathroom. (4 marks)

- 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? (2 marks)

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. (3 marks)

See next page

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)

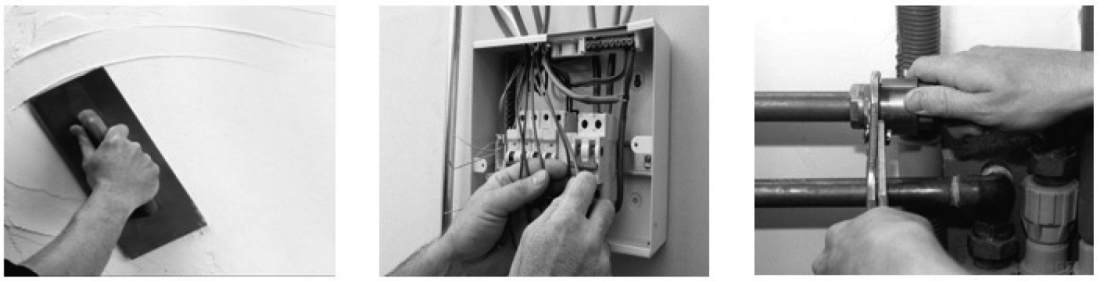
14 An excavator removes 64 m^3 of soil from a trench. The soil bulked by 35% on removal from the ground. The bulk density of the soil is 1800 kg/m^3. The soil was loaded on to tipper-trucks with a capacity of 20 tonnes.

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)



a) b) c)

Figure 3

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)

_____

_____

_____

_____

See next page

19 Explain how the job of a site carpenter differs from that of a bench joiner. (5 marks)

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)

End of examination