





6720-552 MARCH 2018

Level 3 Advanced Technical Extended Diploma in Constructing the Built Environment (Construction) (1080)

Level 3 Constructing the Built Environment – Theory Exam

If provided, stick your candi barcode label here.	Friday 23 <i>M</i> 09:30 – 12:3					
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 23 questions. Answer all questions.
 - Answer the questions in the space provided.
 - The marks for each question are shown in brackets.
- Show **all** calculations.

1 a) State the maximum floor area that can be served by a single ring final circuit.

(1 mark)

b) State the size of fuse or circuit breaker used to protect a final ring circuit in the UK.

(1 mark)

2 Describe the purpose of the valves in:





Figure 1 Figure 2

	a)	Figure 1	(2 marks)
	b)	Figure 2.	(2 marks)
3		lain why an indirect hot water system would be preferred to a direct system in hard ser areas.	(3 marks)
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Explain how a proposed extension to a building could impact on the existing gas supply.

(3 marks)

5 Describe the purpose of the component shown in Figure 3. (2 marks)



Figure 3

6 Determine the maximum power rating of an electric cooker protected by a 30 A miniature circuit breaker on a supply voltage of 240 V.

(2 marks)

b) Determine the current taken by an immersion heater with a maximum power rating of 3.5 kW on a supply voltage of 240 V.

(2 marks)

Idei	dentify two types of building obsolescence.				
 a)	Identify one part of a roof that should be inspected in a condition survey.	(1 marl			
b)	Describe a typical defect associated with it and the consequences of that defect.	(2 marks			
	me three different pieces of non-planning legislation that could impact a nversion project.	(3 marks			
	plain why a designer may choose to undertake façade retention on a nversion project.	(3 marks			
Exp	plain why a contractor might choose to undertake a temporary repair.	(3 marks			

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15	Defi a)	ne the term: Risk.	(1 mark)
	b)	Hazard.	(1 mark)
16	Diffe	erentiate between a dilapidations survey and a schedule of condition.	(6 marks)
17	Expl	ain how a recently graduated building surveyor can achieve chartered status.	(4 marks)

18	Exp	(2 marks)	
19	Sta a)	te the areas covered by the following approved documents: Approved Document P.	(1 mark
	b)	Approved Document Q.	(1 mark
	c)	Approved Document R.	(1 mark
	d)	Approved Document 7.	(1 mark
20	Def a)	fine how the following are used in the construction and built environment sector: SWMP.	(2 marks
	b)	SAP.	(2 marks

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21	Summarise the development of building regulations following The Great Fire of London in 1666.		
22	Explain how Approved Document M1 ensures a materially altered dwelling is accessible for all potential users.	(4 marks)	

23 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 single glazed metal windows (which are badly fitting) 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 wishes to be informed on the type of survey that will be required and the procedure for the survey, any issues that could arise during the conversion of the chapel, the likelihood of the methods used complying with the building regulations and how provision can be made for mains drainage and water supplies to be connected to the chapel.

(3 mark
(3 mar



(12 marks)

specific concerns.			
