

6720-046 and 546 March 2018

6720-36 Level 3 Advanced Technical Extended Diploma in Constructing the Built Environment (Construction) (720)

Q	Acceptable answer(s)	Guidance	Max marks
1	<p>One mark for each of the following.</p> <ul style="list-style-type: none"> Elemental work sections Work packages 	n/a	2
2a)	Tonnes.	n/a	1
2b)	Number.	Accept No or nr.	1
3a)	Profit is the money a project makes after accounting for all costs and expenses (1). The amount will vary according to risk / workload / economic climate (any 1).	n/a	2
3b)	Overheads are the calculated costs of running the company (1) and are generally priced proportionately against a project (1).	n/a	2
4	<p>A coherent explanation of the following. Marks as shown to a maximum of five marks in total.</p> <p>The superficial method is a single price rate method (1). It is calculated on the cost per square meter of the building (1). It is used only in the early stages of the design sequence (1) and is probably the most frequently used method of approximate estimating (1). Its major advantages are that most published cost data is expressed in this form (1) and it is quick and easy to use (1). The approximate quantities method is more reliable and more accurate (1) method of estimating, provided that there is sufficient information to work on (1), which there will not be at early stages of the project (1).</p>	n/a	5
5a)	$£60 \times 10$ (1) = £600 (1)	If candidate gets both the formulae and answer right they will receive 3 marks.	3
5b)	Effective hourly rate = $£600/8$ (1) = £75/hour (1)	n/a	2
6	<p>Any two (one mark each) from:</p> <ul style="list-style-type: none"> Financial (1) 	n/a	2

	<ul style="list-style-type: none"> • Technological (1) • Social (1) 		
7a)	<p>Any one from:</p> <ul style="list-style-type: none"> • Roof covering (1) accept (slates, tiles etc, but only one example of roof covering) • Chimneys (1) • Flashings (1) • Gutters (1) • Parapets (1) • Windows (only one mark even if they list dormer and velux) • Service penetrations (1) • Junctions (1) • Hips and ridges (one mark only for either or both) • Valleys (1) 	n/a	1
7b)	<p>A brief description of a defect (1) and consequence (1) of a) for a total of two marks. Any other appropriate answer.</p>	n/a	2
8	<p>Any three relevant pieces of legislation (one mark each) including but not exclusively:</p> <ul style="list-style-type: none"> • Building Regulations (1) • Fire regulations (accept this rather than the full fire order reform etc) (1) • Party Wall Etc Act (1) • Health and safety regs generally (1). • CDM (1) accept this as a standalone item from H&S. • Right to Light (1) 	<p>Only allow one mark for H&S so if they list three, only one will count.</p> <p>Accept an accurate description of a legislation for one mark each.</p>	3
9	<p>A linked explanation to a max of three marks. The reasons to undertake façade retention include:</p> <ul style="list-style-type: none"> • Planning requirements such as conservation area (1) • Listed status (1) • Desire to maintain the street scape/local vernacular (1) • Fashion (1) • Logistical problems with adjoining buildings (1) <p>Any other suitable answer.</p>	<p>If a candidate list the reasons with no explanation of relevance then a max of one mark in total.</p>	3
10	<p>Coherent explanation to a max of three marks. The reasons include:</p> <ul style="list-style-type: none"> • Out of hours so a full repair cannot be undertaken (1) • H & S risks so made safe before full repair undertaken (1) • The works require specialist materials (1) • The works require legal permission such as planning of Listed Building Consent (1) 	<p>If the candidate lists the reasons then the marks shall be limited to one mark max, provided the list is extensive.</p>	3

	<ul style="list-style-type: none"> • A specialist contractor is required to complete the full repair (1) <p>Any other appropriate consideration</p>		
11	<p>A linked summary to a max of four marks. The considerations will include (one mark for all appropriate considerations as part of the discussion):</p> <ul style="list-style-type: none"> • Access and egress (so the occupant does not have to go through the shop) • Fire separation • Sound separation • Services provision • Available space • Aesthetics • Current condition of the property • Planning permission • Amount of light available <p>Any other suitable answer.</p>	If the candidate provides lists with no reasons then the marks shall be limited to two mark max.	4
12a)	Electrical safety.	n/a	1
12b)	Security in dwellings.	n/a	1
12c)	High speed electronic communications networks.	n/a	1
13	SWMP is a Site Waste management Plan (1) and it is used to manage and control the amount of waste being generated and disposed of from construction sites (1).	n/a	2
14	<p>A coherent discussion that highlights the changes that were incorporated after the fire. The discussion should consider some of the following (one mark for each as it is discussed):</p> <ul style="list-style-type: none"> • All houses were to be in brick or stone. • No wooden eaves were allowed. • Roofs were pushed back behind brick parapets. • Wooden window frames were reduced. • Thatch was forbidden. Roofs were to be in slate or tile. • Party walls between houses had to be thick enough to withstand two hours of fire. • New buildings had to be planned in terms of footprint to avoid overcrowding. 	<p>A list will only gain a max of one mark.</p> <p>Accept any approaches that discuss the general development of the building regs.</p>	3
15	<p>A coherent discussion that features the key elements of Approved Document M1 up to a maximum of four marks.</p> <p>M1 provides three categories of dwelling:</p>	A list will only attract one mark maximum and only if it is very comprehensive.	4

	<p>Requirement M4(1): Category 1 – Visitable dwellings (1). Compliance with this requirement is achieved when a new dwelling makes reasonable provision for most people (1), which includes wheelchair users to access and enter the dwelling,(1) and access habitable rooms (1) and sanitary facilities (1) on the entrance level.</p> <p>Requirement M4(2): Category 2 – Accessible and adaptable dwellings (1). This requirement is met when a new dwelling provides reasonable provision for most people to access the dwelling and includes features that make it suitable for a range of potential occupants (1), including older people (1), individuals with reduced mobility (1) and some wheelchair users (1).</p> <p>Requirement M4(3): Category 3 – Wheelchair user dwellings (1). This requirement is achieved when a new dwelling provides reasonable provisions for a wheelchair user to live in the dwelling (1) and have the ability to use any outdoor space (1), parking (1) and communal facilities (1).</p>		
16	<p>Intention: <i>A key aspect of this question is to show a good level of understanding of the tendering procedures and processes in the construction industry, along with building design and construction details required to refurbish an old building and convert it into a four-bedroom house.</i></p> <p>Band 1 (1-4 marks) The learner identifies a limited number of the key issues, with limited discussion to support them. The response lacks detail and makes a limited reference to the scenario. The learner makes no useful recommendations to the client. To access the higher marks in this band, learners show a breadth of knowledge on either the technical or tendering and estimating aspects of the brief, but not both, and without any real depth of understanding.</p> <p>Band 2 (5-8 marks) The learner identifies a range of the key issues, with a broad discussion to support them. The responses are detailed and make some reference to the scenario. The learner makes some useful recommendations to the client. To access the higher marks in this band, learners have shown a wide breadth of knowledge on the technical and tendering and estimating aspects of the brief, but without necessarily showing any real depth of understanding in a consistent way.</p>	<p>Indicative content: Approximate quantities; elemental cost planning, tendering procedures, traditional tendering, negotiated tendering, tender timescales, conversion and adaptation processes, legislation, construction methods, schedules of works and drawings, building regulation compliance, approved documents, application process.</p> <p><i>For no awardable content, award 0 marks.</i></p>	12

	<p>Band 3 (9-12 marks)</p> <p>The learner identifies a comprehensive range of the key issues with a detailed discussion to support them. The responses are detailed and refer to the scenario. The learner demonstrates a thorough understanding of the issues and presents them in a linked and coherent manner. The learner makes many useful recommendations to the client. To access higher marks in this band, learners have shown a comprehensive breadth of knowledge and understanding on the main technical and tendering and estimating aspects of the ERQ brief supported by depth in the range of points made.</p>		
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