

6720-052 and 552 March 2018

**6720-37 Level 3 Advanced Technical Extended Diploma in Constructing the Built Environment (Construction) (1080)**

Q	Acceptable answer(s)	Guidance	Max marks
1a)	100 m <sup>2</sup>	n/a	1
1b)	32 A	Accept 30 A and amps for A	1
2a)	Figure 1: Radiator valve with drainage (1) is used to control the flow of water into a radiator and/or to drain the system (1).	n/a	2
2b)	Figure 2: Isolation valve (1) is used to interrupt the flow of water along pipes to do work without draining supply (1).	n/a	2
3	A linked explanation with marks as shown below to a maximum of <b>three</b> marks.  Hard water contains soluble chemicals that are driven out of solution when the water is heated. This can cause furring of pipes (1) and this reduces flow (1). In direct systems continually refreshed supplies of water are directly heated (1) whereas in indirect supplies the same water is heated over and over again in the primary circuit (1). This reduces furring to a minimum (1). The element can also be easily removed and cleaned (1) in an indirect system	n/a	3
4	At least <b>two</b> of the following to be mentioned to a maximum of <b>three</b> marks.  <ul style="list-style-type: none"> <li>• Service pipes may have to be relocated (1) to take account of new foundations (1).</li> <li>• Gas meter may have to be moved (1) to ensure it remains on the outside of the building for ease of access (1).</li> <li>• Balanced flues may have to be moved (1) to ensure access to external air (1).</li> <li>• Gas pipe may have to be increased in diameter (1) to provide greater capacity (1).</li> </ul>	n/a	3
5	The component is an (S-type) water trap (1) designed to prevent sewer smells entering a building (1).	n/a	2

6a)	Power = Voltage x Current (or Watts = Volts x Amps, or $P = VI$ ) (1). $P = V \times I = 240 \times 30 = 7200 \text{ W}$ , accept 7 kW to 7.2 kW (1).	n/a	2
6b)	Power/Voltage = Current (1). $3500/240 = 14.583 \text{ A}$ (1). Accept 15 A	n/a	2
7	Any <b>two</b> (one mark each) from: <ul style="list-style-type: none"> <li>• Financial (1)</li> <li>• Technological (1)</li> <li>• Social (1)</li> </ul>	n/a	2
8a)	Any <b>one</b> from: <ul style="list-style-type: none"> <li>• Roof covering (1) (accept slates, tiles etc., but only one example of a roof covering)</li> <li>• Chimneys (1)</li> <li>• Flashings (1)</li> <li>• Gutters (1)</li> <li>• Parapets (1)</li> <li>• Windows (only one mark even if they list dormer and velux)</li> <li>• Service penetrations (1)</li> <li>• Junctions (1)</li> <li>• Hips and ridges (one mark only for either or both)</li> <li>• Valleys (1)</li> </ul>	n/a	1
8b)	A brief description of a defect (1) and consequence (1) of a) for a total of <b>two</b> marks. Any other appropriate answer.	n/a	2
9	Any <b>three</b> relevant pieces of legislation (one mark each) including but not exclusively: <ul style="list-style-type: none"> <li>• Building Regulations (1)</li> <li>• Fire regulations (accept this rather than the full fire order reform etc) (1)</li> <li>• Party Wall Etc Act (1)</li> <li>• Health and safety regs generally (1)</li> <li>• CDM (1) accept this as a standalone item from H&amp;S</li> <li>• Right to Light (1)</li> </ul>	Only allow <b>one</b> mark for H&S so if they list three only one will count.  Accept an accurate description of a legislation for <b>one</b> mark each.	3
10	A linked explanation to a max of <b>three</b> marks from the below: The reasons to undertake façade retention include: <ul style="list-style-type: none"> <li>• Planning requirements such as conservation area (1)</li> <li>• Listed status (1)</li> </ul>	If a candidate list the reasons with no explanation of relevance then a max of <b>one</b> mark in total.	3

	<ul style="list-style-type: none"> <li>• Desire to maintain the street scape/local vernacular (1)</li> <li>• Fashion (1)</li> <li>• Logistical problems with adjoining buildings (1)</li> </ul> <p>Any other suitable answer.</p>		
<b>11</b>	<p>Coherent explanation to a max of <b>three</b> marks.</p> <p>The reasons include:</p> <ul style="list-style-type: none"> <li>• Out of hours so a full repair cannot be undertaken (1)</li> <li>• H &amp; S risks so made safe before full repair undertaken (1)</li> <li>• The works require specialist materials (1)</li> <li>• The works require legal permission such as planning of Listed Building Consent (1)</li> <li>• A specialist contractor is required to complete the full repair (1)</li> </ul> <p>Any other appropriate consideration.</p>	<p>If the candidate lists the reasons then the marks shall be limited to <b>one</b> max, provided the list is extensive.</p>	<b>3</b>
<b>12</b>	<p>A linked summary to a max of <b>four</b> marks.</p> <p>The considerations will include (<b>one</b> mark for all appropriate considerations as part of the discussion):</p> <ul style="list-style-type: none"> <li>• Access and egress (so the occupant does not have to go through the shop)</li> <li>• Fire separation</li> <li>• Sound separation</li> <li>• Services provision</li> <li>• Available space</li> <li>• Aesthetics</li> <li>• Current condition of the property</li> <li>• Planning permission</li> <li>• Amount of light available</li> </ul> <p>Any other suitable answer.</p>	<p>If the candidate provides lists with no reasons then the marks shall be limited to <b>two</b> max.</p>	<b>4</b>
<b>13</b>	<p>Candidates will correctly select <b>two</b> of the many roles for <b>one</b> mark each. To achieve <b>two</b> marks per role they will need to describe what that role will entail. Typical roles include:</p> <ul style="list-style-type: none"> <li>• Asset management (1) – preparing, administration and monitoring asset management plans (PPM plans) (1).</li> <li>• Design and specification (1) – preparing drawings and specifications for works on the company’s properties (1).</li> </ul>	<p>Due to the range, any other applicable answer and description will be considered.</p>	<b>4</b>

	<ul style="list-style-type: none"> <li>Project management (1) – managing all aspects of the maintenance and refurbishment of the companies property portfolio (1).</li> <li>Maintenance (1) managing all maintenance aspects of the property portfolio (1).</li> </ul>		
<b>14</b>	<p><b>One</b> mark for each correct answer to a max <b>two</b> marks from:</p> <ul style="list-style-type: none"> <li>Testing the integrity of timber elements</li> <li>Testing the soundness of plaster</li> <li>Testing the strength of pointing</li> <li>Lifting drain lids</li> <li>To hold the end of a tape</li> <li>Check depths eg cavities.</li> </ul> <p>Any other appropriate answer.</p>	n/a	<b>2</b>
<b>15a)</b>	<p><b>One</b> mark for a correct definition.</p> <p>Risk = is the chance or probability that a person will be harmed or experience an adverse health effect if exposed to a hazard.</p>	n/a	<b>1</b>
<b>15b)</b>	<p><b>One</b> mark for a correct definition.</p> <p>Hazard = A hazard is any source of potential damage, harm or adverse health effects on something or someone</p>	n/a	<b>1</b>
<b>16</b>	<p>A coherent and linked discussion that considers the differences between the two types of survey and not a simple list.</p> <p>Dilapidations survey is one typically undertaken at the end of a lease (1) although they can be undertaken at any time depending on the lease terms. They are a record of the condition (1) of a property at that stage and are used by landlords to ensure the property is kept in a good state of repair (1). The schedule will detail all the defects (1) and costs to repair (1).</p> <p>A schedule of condition is a record of the condition of a property (1) typically at the start of a lease (1) tenants use them to ensure their repairing liability is not exceeded at the end of the leasehold term (1). The schedule typically contains a lot of photographs with limited description (1), there are no costs attached to the schedule (1).</p>	<p>If the candidate provides a list of activities then only allow a max of <b>three</b> marks for the whole question. To attain <b>three</b> though the list must be comprehensive and consider all of the elements listed below.</p>	<b>6</b>

<p><b>17</b></p>	<p>A coherent and linked discussion that considers how a building surveyor can achieve professional status to become chartered and not a simple list.</p> <p>The BS needs a formally recognised RICS approved degree or similar (1). They will then apply for the Assessment of Professional Competence (APC) (1). This is a formal programme of training where the candidate will be monitored typically over a 2-year period (1). They will have a supervisor (1) and a counsellor (1).</p> <p>Through the 2-year period the candidate will gather evidence at different levels (1) to demonstrate their competence and ability to work at the required level (1).</p> <p>When they have undertaken the minimum period and their supervisor feels they are ready, they will apply to undertake the final assessment (1). This is a presentation on a case study (1) and professional interview (1) with three experienced APC assessors (1). On achievement of this, they can use the designate MRICS (1).</p> <p>The alternative route is the experienced practitioner route (1). The building surveyor will need to work as a building surveyor for a period of five years and then be able to demonstrate adequate professional knowledge and competency (1). This route also requires a formal training period (1) and professional assessment interview (1).</p>	<p>If the candidate provides a list of activities then only allow a max of <b>two</b> marks for the whole question. To attain <b>two</b> though the list must be comprehensive and consider all the elements listed below.</p>	<p><b>4</b></p>
<p><b>18</b></p>	<p><b>Two</b> marks available, response from any of the following.</p> <p>Response to legislative changes (1) to ensuring the industry remains compliant with legislation (1).</p> <p>Response to serious issues (disasters) (1) that have identified gaps or inefficiencies within the previous versions of the regulations (1).</p> <p>Ensure the purpose of the regulations remain fit for purpose (1) by improving accessibility and use of buildings (1).</p> <p>Ensure the purpose of the regulations remain fit for purpose (1) by increasing performance of buildings (reference to new technology) (1).</p>	<p>n/a</p>	<p><b>2</b></p>

	Ensure the purpose of the regulations remain fit for purpose (1) by improving safety of building users (1).		
<b>19a)</b>	Electrical safety.	n/a	<b>1</b>
<b>19b)</b>	Security in dwellings.	n/a	<b>1</b>
<b>19c)</b>	High speed electronic communications networks.	n/a	<b>1</b>
<b>19d)</b>	Materials and workmanship.	n/a	<b>1</b>
<b>20a)</b>	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	<b>2</b>
<b>20b)</b>	SAP- Standard Assessment Procedure (1) and it is the methodology used by the Government to assess and compare the energy and environmental performance of dwellings (1).	n/a	<b>2</b>
<b>21</b>	<p>A coherent discussion that highlights the changes that were incorporated after the fire. The discussion should consider some of the following (<b>one</b> mark for each as it is discussed):</p> <ul style="list-style-type: none"> <li>• All houses were to be in brick or stone.</li> <li>• No wooden eaves were allowed.</li> <li>• Roofs were pushed back behind brick parapets.</li> <li>• Wooden window frames were reduced.</li> <li>• Thatch was forbidden. Roofs were to be in slate or tile.</li> <li>• Party walls between houses had to be thick enough to withstand two hours of fire.</li> <li>• New buildings had to be planned in terms of footprint to avoid overcrowding.</li> </ul>	<p>A list will only gain a max of <b>one</b> mark.</p> <p>Accept any approaches that discuss the general development of the building regs.</p>	<b>4</b>
<b>22</b>	<p>A coherent discussion that features the key elements of Approved Document M1 up to a maximum of <b>four</b> marks.</p> <p>M1 provides three categories of dwelling: Requirement M4 (1): Category 1 – Visitable dwellings (1). Compliance with this requirement is achieved when a new dwelling makes reasonable provision for most</p>	A list will only attract <b>one</b> mark maximum and only if it is very comprehensive.	<b>4</b>

	<p>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).</p> <p>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).</p> <p>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>		
<b>23a)</b>	<p>A maximum of <b>three</b> marks from:</p> <p>The mortgage valuation survey is required by the mortgage lenders (1) to ensure the property they are lending against is of sufficient value and condition to warrant the lending (1). The RICS level three survey looks in detail at all the elements of the property (1), makes reference to any defects and proposes appropriate remedial measures (1).</p>	n/a	<b>3</b>
<b>24b)</b>	<p>The electrical services to the building will need to be inspected by a qualified electrician (1). Because of the age of the building, it is unlikely that the existing wiring will be suitable and a new system should be installed (1). The new system will allow for the provision of appropriate, positions of sockets, levels of lighting, ventilation, correctly sized cables, and a new distribution board (1).</p> <p>Allow 1 mark for new sockets and lighting, 1 mark correctly sized cables and 1 mark for a new distribution board, which includes MCBs.</p>	n/a	<b>3</b>
<b>24c)</b>	<p><b>Intention:</b></p> <p><b><i>A key aspect of this question is to show a good level of understanding of the types of building surveys needed and the procedures used in a building refurbishment and conversion project including the installation of drainage and water building services.</i></b></p>	<p><b>Indicative content:</b></p> <p>Types of survey, health and safety considerations, procedure for undertaking a survey, conversion and adaptation processes, legislation, construction methods, schedules of works and drawings, building regulation compliance,</p>	<b>12</b>

	<p><b>Band 1 (1-4 marks)</b> 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 higher marks in this band, learners have shown a breadth of knowledge on some elements of building construction, building services, building regulations or building surveying, but not all and not with any real depth of understanding shown.</p> <p><b>Band 2 (5-8 marks)</b> 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 building construction, building services, building regulations and building surveying aspects of the brief, but without necessarily showing any real depth of understanding in a consistent way.</p> <p><b>Band 3 (9-12 marks)</b> 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 the higher marks within this band, learners have shown a comprehensive breadth of knowledge and understanding on the building construction, building services, building regulations and building surveying aspects of the ERQ brief supported by depth in the range of points made.</p>	<p>approved documents, application process. Below ground drainage systems, connections to the mains, the entry into buildings, above ground water and drainage provision.</p> <p><b><i>For no awardable content, award 0 marks.</i></b></p>	
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