

6720-054 and 554 March 2018

6720-37 Advanced Technical Extended Diploma in Constructing the Built Environment (Design and Planning) (1080)

1	Describe the roles of two different members of the production team for a new build school.		
	Acceptable answer(s)	Guidance	Max marks
	<p>One mark for identification, one mark for a short description of any of the following to a max of four marks.</p> <ul style="list-style-type: none"> • Project manager – (no mark for manages the project) manages the whole process from start to finish. Responsible for the overall performance of the team and budget. May not be site based. • Health and safety officer – implements, manages and monitors all aspects of H&S on site. • Quantity surveyor – responsible for managing the monetary side of the project including claims for payment, re-measures, checking the costs against the planned budget etc. May be responsible for material requisition and resource management. • Site manager - day to day management of the site, deals with resource management and client liaison. Has overall responsibility for the site aspect of the project. • Operatives – undertake the actual construction work. • Sub-contractors – specialists brought in to provide skills that may not exist with the main contractor. <p>Any other suitable answer</p>	n/a	4

2	Describe why it is important to consider aesthetics when designing a building for a conservation area.		
	Acceptable answer(s)	Guidance	Max marks
	<p>Coherent discussion that identifies the term and its application. Max three marks for the discussion.</p> <p>The aesthetical consideration is how it looks (1) in terms of style (1) and materials (1). In a conservation area any new property should be sympathetic to the area (1) and there should be some reflection of the area in the design or materials (1). The building does not have to copy the other buildings (1) but it should consider the local vernacular (1).</p>	n/a	3

3	Describe what is meant by the term 'AONB' in terms of its intended purpose.		
	Acceptable answer(s)	Guidance	Max marks
	<p>AONB = Area of outstanding natural beauty (1). Conserve / enhance the natural beauty of the landscape (1).</p>	n/a	2

4	Explain why it is necessary to have planning regulations.		
	Acceptable answer(s)	Guidance	Max marks
	<p>A linked explanation that considers the key issues as to why we need a planning framework, up to a max of three marks.</p> <p>Planning regulations protect both the natural (1) and built environment (1) from over development and help to protect and maintain good design (1) character (1) and the historic environment (1). Without planning people could build anything they desire, anywhere regardless of the impact (1).</p>	<p>If the candidate simply lists the factors, the marks will be restricted to one mark, regardless of the number they provide.</p> <p>Allow marks for any other suitable and appropriate answer to a max of three marks.</p>	3

5	Summarise the factors a local authority will have to consider when developing their Local Plan.		
	Acceptable answer(s)	Guidance	Max marks
	<p>A coherent summary that highlights some of the key points in the consideration of production of the local plan. Marks to be awarded for the elements identified as part of the discussion to a max of four marks.</p> <p>The LA will consider areas such housing (1) both existing and needed (1), population (actual and predicted), commercial considerations such as business space (1), office space (1), industrial space (1). They will also consider elements for the use and enjoyment of the area such as recreational facilities (1), parks (1) and open space (1). They will also consider the existing environment (1), heritage (1) and how the area can be improved with new and appropriate development (1).</p>	<p>If the candidate simply lists the considerations then marks will be capped at two marks.</p>	5

6	Explain the relationship between time, cost and quality in relation to a construction project.		
	Acceptable answer(s)	Guidance	Max marks
	<p>Coherent discussion on the link between the three elements to a max of three marks.</p> <p>The time, cost, quality (triangle) is evident on all projects (1). Reduce one and there will be a knock-on effect on the others (1). Similarly increase one and it can have a knock on effect (1).</p> <p>For example, if time is reduced then there could be a knock on effect on quality as it may not be possible to do to produce the same standard of work in the same time frame (1). Whereas if you increase time, the contractors costs will rise proportionally (1).</p> <p>The candidate can consider many different combinations and variables, but there must be a logical link between them to achieve the marks.</p>	<p>If the candidate defines each term then there will be no marks awarded. The answer requires them to explain the link between them and how one can affect the other.</p>	3

7	Identify two types of building obsolescence.		
	Acceptable answer(s)	Guidance	Max marks
	Any two (one mark each) from: <ul style="list-style-type: none"> • Financial (1) • Technological (1) • Social (1) 	n/a	2

8a	Identify one part of a roof that should be inspected in a condition survey.		
	Acceptable answer(s)	Guidance	Max marks
	Any one from: <ul style="list-style-type: none"> • Roof covering (1) (accept slates, tiles etc., but only one example of a 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
8b	Describe a typical defect associated with this roof part and the consequences of that defect.		
	Acceptable answer(s)	Guidance	Max marks
	A brief description of a defect (1) and consequence (1) of a) for a total of two marks. Any other appropriate answer.	n/a	2
8c	State a suitable repair for the defect.		
	Acceptable answer(s)	Guidance	Max marks

	An appropriate repair to the defect identified in b).	n/a	1
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9	Name three different pieces of non-planning legislation that could impact a conversion project.		
	Acceptable answer(s)	Guidance	Max marks
	Any three relevant pieces of legislation (one mark each) including but not exclusively: <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 	Only allow one mark for H&S so if they list three only one will count.	3

10	Explain why a designer may choose to undertake façade retention on a conversion project.		
	Acceptable answer(s)	Guidance	Max marks
	A linked explanation to a max of three marks from the below: The reasons to undertake façade retention include: <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) Any other suitable answer.	If a candidate list the reasons with no explanation of relevance then a max of one mark in total.	3

11	Explain why a contractor might choose to undertake a temporary repair.		
	Acceptable answer(s)	Guidance	Max marks
	<p>Coherent explanation to a max of three marks.</p> <p>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) • A specialist contractor is required to complete the full repair (1) <p>Any other appropriate consideration.</p>	<p>If the candidate lists the reasons then the marks shall be limited to one mark max, provided the list is extensive.</p>	3

12	Summarise the factors to be considered when converting store rooms above a shop for conversion into a flat.		
	Acceptable answer(s)	Guidance	Max marks
	<p>A linked summary to a max of five marks.</p> <p>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 <p>Any other suitable answer.</p>	<p>If the candidate provides lists with no reasons then the marks shall be limited to one mark max.</p>	5

13	Describe two roles that a building surveyor could undertake in a 'client-side' organisation.		
	Acceptable answer(s)	Guidance	Max marks
	<p>Candidates will correctly select two of the many roles for one mark each. To achieve two marks per role they will need to describe what that role will entail.</p> <p>Typical roles include:</p> <ul style="list-style-type: none"> • Asset management (1) – preparing, administration and monitoring asset management plans (PPM plans) (1). • Design and specification (1) – preparing drawings and specifications for works on the company's properties (1). • Project management (1) – managing all aspects of the maintenance and refurbishment of the companies property portfolio (1). • Maintenance (1) managing all maintenance aspects of the property portfolio (1). 	Due to the range, any other applicable answer and description will be considered.	4

14	State two alternative uses for a screwdriver when undertaking a building survey, other than inserting or removing screws.		
	Acceptable answer(s)	Guidance	Max marks
	<p>One mark for each correct answer to a max two marks from:</p> <ul style="list-style-type: none"> • Testing the integrity of timber elements • Testing the soundness of plaster • Testing the strength of pointing • Lifting drain lids • To hold the end of a tape • Check depths e.g. cavities. <p>Any other appropriate answer.</p>	n/a	2

15	Define the term:		
15a	Risk.		
	Acceptable answer(s)	Guidance	Max marks
	<p>One 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	1
15b	Hazard.		
	Acceptable answer(s)	Guidance	Max marks
	<p>One 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	1

16	Differentiate between a dilapidations survey and a schedule of condition.		
	Acceptable answer(s)	Guidance	Max marks
	<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</p>	<p>If the candidate provides a list of activities then only allow a max of two marks for the whole question. To attain two marks though the list must be comprehensive and consider all of the elements listed.</p>	4

	<p>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>		
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17	Explain how a recently graduated building surveyor can achieve chartered status.		
	Acceptable answer(s)	Guidance	Max marks
	<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 building surveyor 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 two marks for the whole question. To attain two marks though the list must be comprehensive and consider all the elements listed below.</p>	4

18	State the areas covered by the following approved documents:		
18a	Approved Document P.		
	Acceptable answer(s)	Guidance	Max marks
	Electrical safety.	n/a	1
18b	Approved Document Q.		
	Acceptable answer(s)	Guidance	Max marks
	Security in dwellings.	n/a	1
18c	Approved Document R.		
	Acceptable answer(s)	Guidance	Max marks
	High speed electronic communications networks.	n/a	1
18d	Approved Document 7.		
	Acceptable answer(s)	Guidance	Max marks
	Materials and workmanship.	n/a	1

19	Define how the following are used in the construction and built environment sector:		
19a	SWMP.		
	Acceptable answer(s)	Guidance	Max marks
	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
19b	SAP.		
	Acceptable answer(s)	Guidance	Max marks
	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	2

20	Summarise the development of building regulations following The Great Fire of London in 1666.		
	Acceptable answer(s)	Guidance	Max marks
	<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. 	A list will only gain a max of one mark.	4

21	Explain how Approved Document M1 ensures a materially altered dwelling is accessible for all potential users.		
	Acceptable answer(s)	Guidance	Max marks
	<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: 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. 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). 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>	<p>A list will only attract one mark maximum and only if it is very comprehensive</p>	4

22	<p>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.</p> <p>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, what constraints would be in place that could impact the design and how to be successful in achieving planning approval.</p>		
22a	Differentiate between a Mortgage Valuation Survey and a RICS Level 3 survey.		
	Acceptable answer(s)	Guidance	Max marks
	<p>A maximum of three 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	3
22b	Explain the role of external consultants in the design and planning stage.		
	Acceptable answer(s)	Guidance	Max marks
	<p>At the design stage the external consultants could include planners, health and safety, engineers, surveyors (any one from the previous). Their role will depend upon what is required of them, primarily though they are employed to provide specialist advice (1) in their area of expertise. The architect will typically employ them on a needs basis (1). The external consultant will feed into the design to assist the architect (1).</p>	n/a	3

22c	Discuss the main considerations for your client.		
	Acceptable answer(s)	Guidance	Max marks
	<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</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</p> <p>Band 3 (9-12 marks) 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 in this band, learners</p>	<p>Indicative content: 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, approved documents, application process, design limitations, Buildability, health and safety, the functional requirements, planning policy, planning documentation, planning procedures.</p> <p><i>For no awardable content, award 0 marks</i></p>	12