



## **6720-052/552 Level 3 Constructing the Build Environment (Construction)**

**Version 1.1 – December 2017**

**Sample Questions Mark Scheme**

**1**

State the purpose of the following components of a domestic electrical system. (3 marks)

- i. Consumer unit.
- ii. Electricity meter.
- iii. Miniature circuit breaker.

**Answer**

- i. To safely distribute mains electrical supplies to subsidiary circuits. (1)
- ii. To measure the quantity of electricity consumed in a property. (1)
- iii. To automatically switch off an electrical circuit if overloaded or faulty. (1)

Test Spec Reference: 310.1.2 AO1

**2**

Explain why a feed and expansion tank **must** be incorporated into an open-vented hot water system. (4 marks)

**Answer**

Marks as shown below to a maximum of **four** marks.

Feed and expansion tanks have a pipe that allows water to flow out of the tank (1), through a float valve, into the system (1), to keep it topped up when water is drained off or lost by evaporation (1).

When the central heating is switched on, the water in the heating system gets hot and expands (1) As the hot water expands it runs back up a pipe (1) into the feed and expansion tank, so accommodating the expansion (1).

Test Spec Reference: 310.2.1 AO2

**3**

Identify **two** different types of proactive maintenance regime for a residential property. (2 marks)

**Answer**

Any **two** for **one** mark each.

- Planned (1)
- Preventative (1)
- Programmed (1)

Test Spec Reference: 313.2.1 AO1

**4**

Explain how the requirements of the Party Wall etc Act are satisfied on a residential conversion project. (6 marks)

**Answer**

Marks as shown, up to a maximum of **six** marks.

The Party Wall etc Act protects all party walls (1) structures (1) and boundaries (1). If the works on or close to any of these a Party Wall award will be required (1). No work that will impact on the structural stability of an adjacent wall, structure or boundary can be undertaken without notice being served (1). The notice is served by the building owner (1) on the adjoining owner (1) typically by a surveyor. The surveyor for both parties will agree the scope of works, the impact on the wall and issue a Party Wall Award (1). The works can then commence. On completion of the works, the wall/boundary/structure is inspected again and provided there are no issues the works are signed off (1).

Test Spec Reference: 313.3.2 AO2

**5**

Describe the considerations for the implementation of a lone working policy for surveyors. (4 marks)

**Answer**

Marks as shown, up to a maximum of **four** marks.

A lone working policy will provide adequate protection for a surveyor working alone. This will include a mechanism for checking the surveyor is safe at all times (1) this could include a detailed record of where the surveyor is working (1), the type of work they are undertaking (1), and one person in the office will have responsibility for checking on the surveyor (1). It will also include a mechanism for checking on the surveyor (1), this will include regular phone calls (1), providing emergency alarms/sounders (1), in person checks (1), in addition to this emergency contact details will be provided to the surveyors next of kin should they not arrive home as expected (1).

Test Spec Reference: 314.2.3 AO1

**6**

Explain how a housing association surveyor can ensure their portfolio of properties remains in good condition. (4 marks)

**Answer**

Marks as shown, up to a maximum of **four** marks.

The housing association surveyor would undertake a Stock Condition Survey (1) of their properties. This will record the current condition (1) and works required (1) and it will identify maintenance needs (1). From this a maintenance plan can be formulated to ensure the stock is kept in the best possible condition (1).

Test Spec Reference: 314.2.1 AO2

**7**

Identify the relevant Approved Documents that deals specifically with: (3 marks)

- i. sanitation, hot water safety and water efficiency
- ii. toxic substances
- iii. structure.

**Answer**

- i. Approved Document G (1)

- ii. Approved Document D (1)
- iii. Approved Document A (1)

Test Spec Reference: 316.2.1 AO1

## 8

A company has purchased a disused, listed, Victorian cotton mill. They intend to convert the mill into luxury flats. The company wants the design to be energy efficient and is keen to consider the needs of disabled people. The local community has expressed concerns about the social impact on the area and the possible economic consequences of the development. The company is preparing the documents needed to obtain planning permission and have already commissioned a building survey of the mill. No gas supply will be provided to the converted properties.

- a) Describe the building services requirements of the luxury flats. (3 marks)

### Answer

- a) Marks as shown below to a maximum of **three** marks.  
Electricity for cooking, heating and power (1). Drainage (separate systems) (1). Indirect hot and cold water systems (1), separate heating arrangements for each flat (1), telecommunication systems as standard (1), refuse disposal systems (1). Sanitary ware (1). Renewable energy sources (1).
- b) Explain the factors to be considered when applying for building control approval for a conversion project. (3 marks)

### Answer

- b) Marks as shown below to a maximum of **three** marks. Answers should refer to compartmentation issues of individual flats.  
Conversions require special attention to prevention of fire spread (1), sound insulation between dwellings (1), thermal insulation of building and individual flats (1), new forms of security and access, both to building and to individual properties (1). This is all implied by the division of an existing building into several integral properties ie independent functioning of the flats (1), extension and upgrade of electrical services.
- c) Discuss the alterations that need to be made to the mill and the documentation that will be used in the design and planning. (12 marks)

### Indicative Content

Internal partitions, suspended ceilings, window replacement, new floors, internal insulation, roof improvement and insulation, illumination, heating and ventilation, modern services, drainage, cold water, access improvements, fire detection and protection; building regulation compliance with Approved Documents L and M (Access) in particular, use of building survey reports to plan work, relevant documents including drawings, specifications, schedules, environmental impacts, electrical supply principles and layout.

### Band 1 (0-4 marks)

The learner identifies a limited amount of the alterations to be made and the documentation to be used, but there is little in the way of description. The learner's response lacks detail and is not clearly linked to the scenario.

**Band 2 (5-8 marks)**

The learner identifies a wide range of the alterations to be made and the documentation to be used and supports this with brief descriptions. The learner's response is detailed but incomplete and has clear links to the scenario in most cases.

**Band 3 (9-12 marks)**

The learner identifies a comprehensive range of the alterations to be made and the documentation to be used and supports this with in-depth descriptions. The learner's response is detailed and complete and has clear and accurate links to the scenario.

Test Spec Reference: 310.1.3, 313.3.1, 313.3.3, 314.2.1, 316.2.2 A04

SAMPLE