



8202-535 JUNE 2018

Level 3 Advanced Technical Diploma in Plumbing (450)

Level 3 Plumbing – Theory exam

If provided, stick your candidate barcode label here.

Wednesday 20 June 2018
09:30 – 11:45

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
- non-programmable scientific calculator

General instructions

This question paper is the property of City and Guilds of London and should be returned after the examination.

- The maximum marks for each question is shown in brackets.
- Answer **all** questions.



- 1 State the term used for each of the following fluid categories.
- a) Category 3. (1 mark)

 - b) Category 4. (1 mark)

 - c) Category 5. (1 mark)

2 Explain the function of a Float switch in a break cistern. (2 marks)

3 Differentiate between how mechanical and non-mechanical protect against back flow. (2 marks)

- 4 Figure 1 shows an integral controlled cold water booster pump. Identify the components labelled A and B. (2 marks)

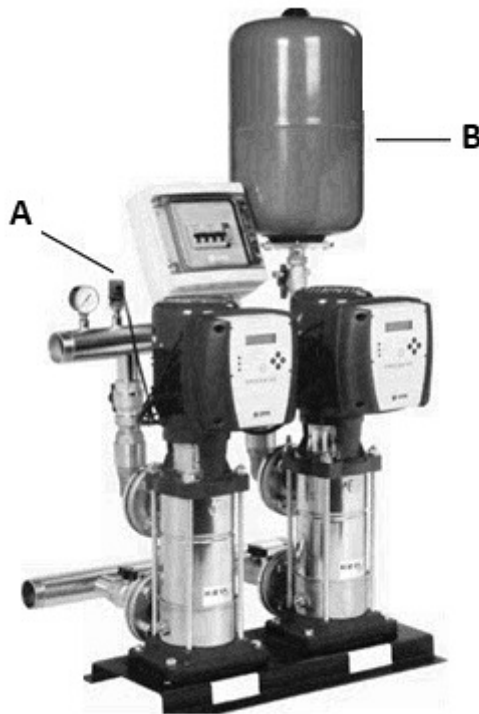


Figure 1

- 5 State where the secondary return pipework should enter the cylinder for correct secondary circulation. (1 mark)

- 6 Under the Water Act 2003, what **two** documents regulate how plumbers must install, commission and maintain water supplies within domestic buildings? (2 marks)

- 7 State **two** components in an unvented hot water system that enable water to be discharged to a safe termination. (2 marks)

9 a) Explain why the pump is positioned after the vent and feed pipework as shown in Figure 2.

(2 marks)

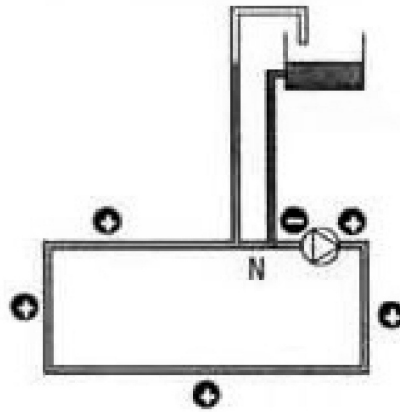


Figure 2

b) Explain why it is important to maintain a **maximum** dimension of 150 mm between the vent and feed.

(3 marks)

10 Define the term Boiler Interlock.

(2 marks)

11 State **two** advantages of underfloor heating. (2 marks)

12 State the regulation that sets the provisions for the ventilation of a building. (1 mark)

13 Complete Table 1 by stating the **maximum** distances, in metres, from the soil stack to the appliance when installing the diameter waste pipework shown. (3 marks)

Waste pipe diameter (mm)	Maximum distance (m)
32	_____
40	_____
50	_____

Table 1

14 Explain the installation requirements on the outlet pipe of a WC macerator. (6 marks)

19 Explain how the internal components of a double-check valve protects wholesome water from contamination.

(2 marks)



Figure 3

20 What type of installation is shown in Figure 4?

(1 mark)

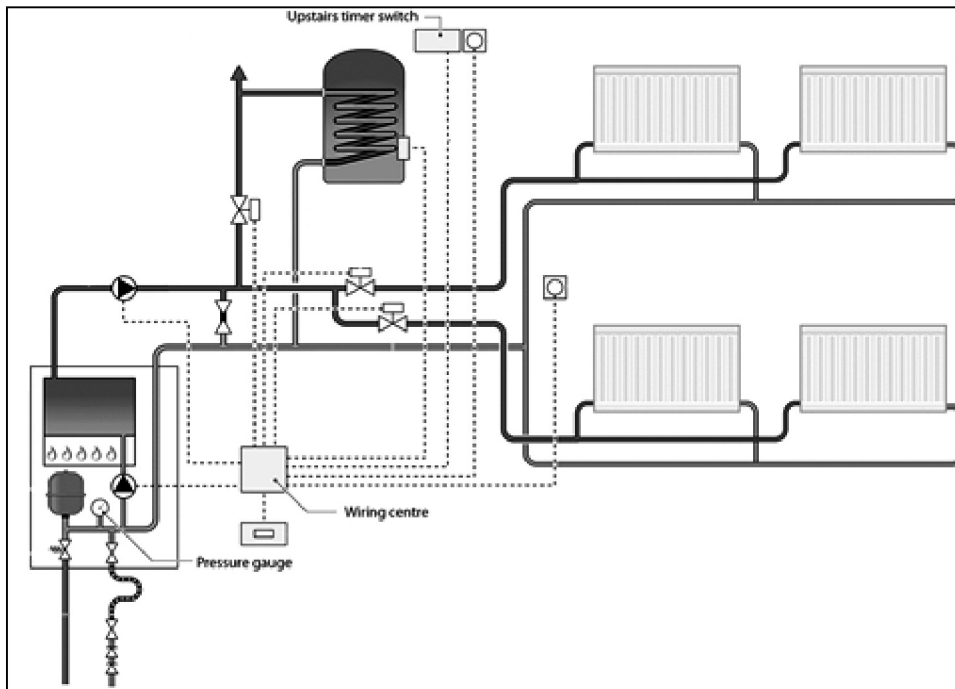


Figure 4
