HIP Magazine – Autumn Issue 2017 - Answer Sheet

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Hot water multiple choice question answers

1. A

2. C

3. B

4. B

5. B

6. C

7. C

8. A

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Cold water Key words answers

1. Potable
2. Wholesome
3. Trunk main
4. Principle main
5. Bore hole
6. Sterilisation
7. Ferrule
8. Permeation
9. Back flow
10. Dezincification
11. Water meter
12. Scale reducer
13. Weir cup
14. Cold water storage cistern
15. Float operated valve

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Water testing and pressure

a) 3.8bar
b) 440KPA
c) 15bar

Water flow rates

a) 0.3 l/s
b) 12 l/m
c) 0.25 l/s
d) 7.2l/m

Hydraulic pressure tester - for testing rigid and push fit plastic pipe work

Weir/flow cup - to find water flow rates

Presser gauge - to find the incoming mains water pressure. Used for checking water pressure when installing appliances such as a boiler or unvented hot water system

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Gas rates

Daniel is to carry out a landlord certificate to an open flue boiler, when checking the burner pressure he notices it is far too high. What effect could this have on the appliance?

- Incomplete combustion
- The flue not able to handle the extra products of combustion
- Excessive boiler temperature
- ***All of the above***

Daniel goes to check the gas rate at the meter. Installed is a U6 metric meter. To check the gas rate of the appliance he is working on, does he?

- Turn all gas appliance in the house on to full rate
- ***Only turn on the appliance he is working on***

Daniel takes a reading at the gas meter before he starts the test and a reading after he completes his test, how much time should be allowed for the test?

- 1 minute
- ***2 minutes***
- 3 minutes
- 4 minutes

Daniels first reading is 00867 466m3 and his second reading is 00867 511m3. Over 1 hour how much gas in m3/hr would the appliance consume?

- 1.85m3/hr
- 1.42m3/hr
- ***1.35m3/hr (00867 511 minus 00867 466= 0.045x 30mins=1.35m3/hr***
- 1.64m3/hr

When Daniel did his calculation he used a CV of 38.6 MJ/m3 and he found the appliance had an input rating of:

- 17.23 kW
- 12.42kW
- ***14.43 kW (1.35x38.6/3.6=14.43kw***

- 15.00kW

When checking the data plate on the boiler he noticed it was a range rated boiler, with a maximum heat input of 11.5 KW, should he

A

Pass the boiler, it's been workin[illegible]k with no issues

B

- ***Carry out further investigation to why the gas rate is high***
- Decrease the gas pipe size to the boiler
- Turn down the boiler thermostat, so the boiler will reach temperature quicker.

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Central heating components

1. What component is in the picture A?

Automatic bypass

2. What size pipework should be connected to fitting A?

22mm

3. In what location should this component be fitted?

A before the pump and between the flow and return
B After the pump and between the flow and return
C After the zone valve and between the flow and return
D Between the vent pipe and the cold feed to the boiler

4. What is the component in picture B?

Tundish

5. Component B will connect to D1 and D2 pipes on an unvented cylinder. What is the maximum length of D1 pipe

600mm

6. What is the minimum length of D2 pipe before a bend?

300mm

7. What is the maximum length a 22mm D2 pipe can be installed without bends?

9 metres

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1. The type of compression fittings used above ground are

B. Manipulative

2. Medium Low Carbon Steel is colour coded

A. Blue

3. MDPE stands for

A. medium density polyethylene

4. Which Building Regulation deals with joist notching?

C. Approved document part A

5. A joist notch should have a maximum depth of

A. 1/8

6. A lead lock is used for

B. Joining a lead pipe to a copper pipe

7. A soundness test for rigid pipe is

B. left to stand for 30 minutes and then a further 1 hour

8. The name of the tool used to thread Low carbon steel pipe is

C. Stock and Dies

9. The recommended clipping distance for vertical 15mm copper is:

A. 1.8m

10. Which of the following plastics can be solvent welded?

A. ABS and uPVC