

Water Process Technician

Sample Practice Knowledge Assessment

Note: this sample test has 40 questions and duration of 70 minutes; the live test has 50 questions and duration of 90 minutes

Please write clearly in block capitals below	
Employer Name	
First Name (s)	
Last Name (s)	
Date of Birth	
Candidate Number	
Apprentice signature	
Date of Knowledge Test	

Level: 3

Standard: Water Process

Pathway: Water Network Technician and Water Leakage Technician

Duration: 70 minutes

Materials

For this paper you must have:

- Pens
- Scientific calculator (non-programmable)

Instructions

- Use black ink or black ball-point pen
- Fill in the boxes at the top of this page
- Answer **all** questions

- There are questions, possible answers as well as a column for you to mark your answer
- Mark your answer with an against the possible answer you think is correct- if you wish to change your answer please put a line through and re-select with another
- Only one answer per question allowed. Answers which do not follow the rules of selection will be disallowed. This may impact on the grade awarded
- Do all rough work in this answer book

Below is a Sample:

Example Question		
London is the capital of...		
Possible answers		Answer
a)	Wales	<input checked="" type="checkbox"/>
b)	Scotland	<input type="checkbox"/>
c)	Northern Ireland	<input type="checkbox"/>
d)	England	<input checked="" type="checkbox"/>

Information

- There are **40** sample questions
- There will be 50 questions in the live knowledge assessment
- All questions should be attempted

Advice

- You are not permitted to leave the examination room for the first 45 minutes and the last 15 minutes of the examination
- Do not spend too long on one question
- Read all questions thoroughly before starting your examination
- Cheating: you will be asked to leave the examination room and will be classified an automatic fail and referred to your employer

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THE WRITTEN PERMISSION OF THE EUIAS**

Do not turn over the page or commence the knowledge test until the invigilator instructs you to

You may use this page for rough work.

This page must not be removed.

Question 1		
RIDDOR (Reporting of Injuries, Diseases and Dangerous Occurrences) requires the reporting of dangerous occurrences at work. Which one of the following is not reportable as a dangerous occurrence?		
Possible answers		Answer
a)	The collapse or over turning of a crane	
b)	Contact with an overhead power line	
c)	Escape of a biological agent likely to cause severe illness	
d)	Accidental damage to a drain or sewer	

Question 2		
An employee has to carry out a work activity which involves a substance that can be hazardous to health. What should they do?		
Possible answers		Answer
a)	Carry on with the work once they have identified the hazardous contents of the container	
b)	Carry out the work, providing they have been suitably trained and have the necessary COSHH assessment information	
c)	Carry out the work using their own initiative to change working procedures and reduce exposure	
d)	Carry out the work once the workplace has been sealed to allow disinfection	

Question 3		
Which ONE of the following is the most common cause of workplace injury?		
Possible answers		Answer
a)	Falling from height	
b)	Attacks by animals	
c)	Manual handling injuries	
d)	Electric shocks	

Question 4		
When sounding an asset in a chamber for leakage purposes, where should you place the listening device?		
Possible answers		Answer
a)	Place the listening device on the spindle of the apparatus	
b)	Open the chamber and place the listening device anywhere inside	
c)	Place the listening device on the lid of the chamber	
d)	With your back to the wind on your strongest ear	

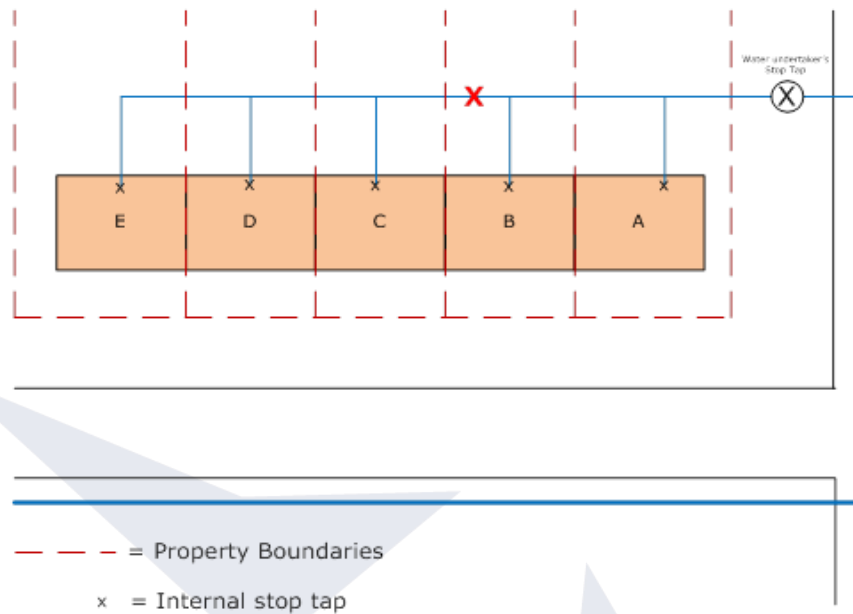
Question 5		
A pilot diaphragm is split.		
What effect would this have on the Pressure Reducing Valve (PRV)?		
Possible answers		Answer
a)	The PRV would shut down	
b)	The PRV would open up fully	
c)	No effect or change	
d)	Control would be lost	

Question 6		
Which of the following is the definition of headloss?		
Possible answers		Answer
a)	Chlorine levels lost as water travels through the system	
b)	Energy that is lost via illegal consumption	
c)	Water that escapes through leaks	
d)	Energy that is lost as water moves through the system	

Question 7

Refer to the diagram below.

Which owner(s) have the responsibility for a leak repair on the pipework marked at the position of the red X?

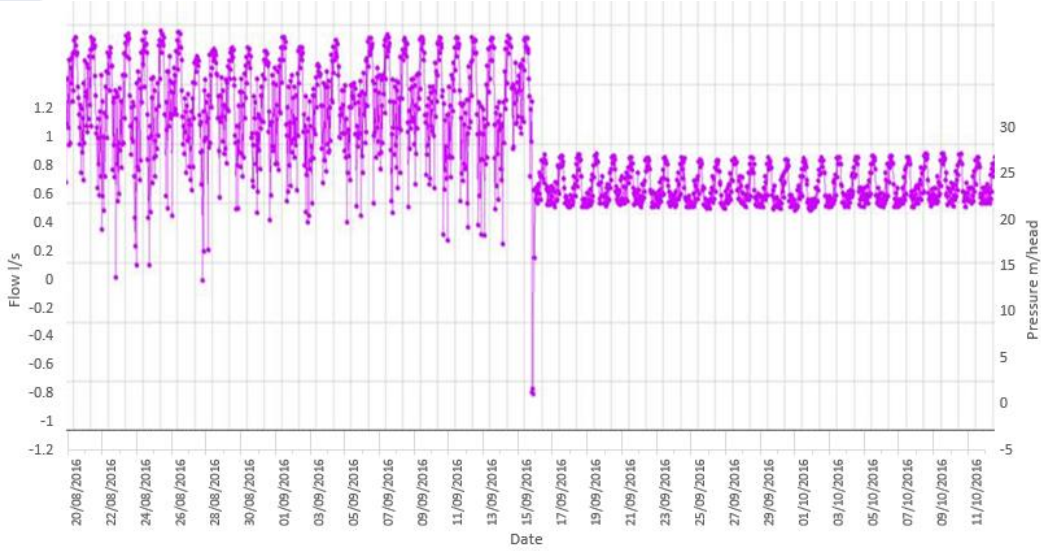


Possible answers

Answer

a)	B	
b)	C, D and E	
c)	B, C, D and E	
d)	A and B	

Question 8		
Which ONE of the following is responsible for a leak on a private property that is a rental property?		
Possible answers		Answer
a)	Tenant	
b)	Property owner	
c)	Water undertaker	
d)	Insurance company	

Question 9		
What does this graph indicate?		
		
Possible answers		Answer
a)	PRV service	
b)	DMA meter failure	
c)	DMA Meter Scaling Factor Error	
d)	Burst main	

Question 10		
The wrong distance is entered into a correlator.		
How would this affect the accuracy of the correlation?		
Possible answers		Answer
a)	Centre correlation	
b)	Out of bracket	
c)	Incorrect velocity	
d)	Accuracy of the location of the leak	

Question 11		
What is the minimum cover, stated by the National Joint Utilities Group (NJUG) guidelines, for the positioning of water mains in a 2.0m footway on a new development site?		
Possible answers		Answer
a)	500mm	
b)	600mm	
c)	750mm	
d)	900mm	

Question 12		
While setting up a mains disinfection, a technician is concerned that a source of water hydrant to feed the chlorination unit is contaminated.		
What should the technician do immediately?		
Possible answers		Answer
a)	Spray with chlorine and carry on without sampling	
b)	Proceed with job and inform their manager on completion	
c)	Spray with chlorine, sample and proceed with chlorination	
d)	Escalate using company procedures	

Question 13		
How many turns would it take to close a standard 100mm sluice valve from fully open?		
Possible answers		Answer
a)	7	
b)	8	
c)	9	
d)	10	

Question 14		
Why would you swap a Pressure Reducing Valves' V-Port for a flat plate?		
Possible answers		Answer
a)	To make it look nicer	
b)	To increase head loss on high flows	
c)	To increase head loss on low flows	
d)	To reduce head loss on high flows	

Question 15		
During a service of a Pressure reducing valve (PRV), what could happen at a Critical Monitoring Point (CMP) if flows changed dramatically?		
Possible answers		Answer
a)	Pressures could increase or decrease	
b)	Pressure would increase	
c)	Pressure would decrease	
d)	Flows would increase	

Question 16		
What must be done in the event of a planned interruption, if the supply is NOT restored by the time stated?		
Possible answers		Answer
a)	Not say anything and hope that no one complains	
b)	Make an automatic payment of £20 to domestic customers and £50 to commercial customers	
c)	Wait until the customers complain and pay those who do complain	
d)	Make an automatic payment of £50 to domestic customers and £20 to commercial customers	

Question 17		
Which ONE of the following is the primary regulator that network quality and sufficiency incidents are reported to?		
Possible answers		Answer
a)	DWI	
b)	OFWAT	
c)	CCW	
d)	EA	

Question 18		
How much water could be stored in a water tank 10 m high with a diameter of 20 m?		
Possible answers		Answer
a)	3,142 m ³	
b)	4,512 m ³	
c)	5,265 m ³	
d)	7,458 m ³	

Question 19		
Approximately how long would it take to turn over twice the volume of a water main which contains 1.25 m ³ of water at 4 l/s?		
Possible answers		Answer
a)	10 mins	
b)	12 mins	
c)	14 mins	
d)	16 mins	

Question 20		
On an air gap, what is the minimum unobstructed distance between the lowest level of a water discharge pipe and spill over level of a cistern containing a potentially contaminated fluid?		
Possible answers		Answer
a)	10 mm	
b)	20 mm	
c)	28 mm	
d)	35 mm	

Question 21		
In a bacteriological sample bottle what chemical is used to neutralise the chlorine?		
Possible answers		Answer
a)	Sodium Biosulphate	
b)	Sodium Chloride	
c)	Sodium Hydroxide	
d)	Sodium Thiosulphate	

Question 22		
A technician is sounding an asset in a chamber for leakage purposes. Where should the technician place the listening device?		
Possible answers		Answer
a)	With their back to the wind on their strongest ear	
b)	Place the listening device on the lid of the chamber	
c)	Open the chamber and place the listening device anywhere inside	
d)	Place the listening device on the spindle of the apparatus	

Question 23		
How much time can elapse before a sample can no longer be analysed?		
Possible answers		Answer
a)	1 hour	
b)	24 hours	
c)	48 hours	
d)	3 days	

Question 24		
What types of supplies are not covered by the water fittings regulations?		
Possible answers		Answer
a)	Over land pipework during incidents	
b)	Private water supplies not connected via the water undertaker	
c)	Private water supplies with a backup supply from the water undertaker	
d)	Temporary builders' connection for no more than 3 months	

Question 25		
A chamber is being pumped out in order to carry out maintenance. Why is it important to maintain a water level below the side ports of a Pressure Reducing Valve (PRV)?		
Possible answers		Answer
a)	To prevent potential ingress into the water main	
b)	To ensure the pipework can be seen properly	
c)	To ensure the technician's hands don't get wet	
d)	To ensure that the technician doesn't need to wear wellington boots	

Question 26		
What is the purpose of a needle valve on a Pressure Reducing Valve (PRV)?		
Possible answers		Answer
a)	It restricts downstream flow	
b)	It controls the outlet pressure	
c)	It controls the opening and shutting speed of the valve	
d)	It stops it working properly	

Question 27		
A suspected contamination occurs during the major service of a Pressure Management Valve.		
What immediate action should be taken?		
Possible answers		Answer
a)	Fully open the upstream valve	
b)	Return PMV in to service and don't tell anyone	
c)	Do not return PMV in to service and escalate	
d)	Flush downstream and arrange for samples to be taken	

Question 28		
What is the Standard of Service for low pressure?		
Possible answers		Answer
a)	9 litres per minute at 15m head	
b)	10 litres per minute at 9m head	
c)	10 litres per minute at 15m head	
d)	9 litres per minute at 10m head	

Question 29		
Under which of the following conditions would a domestic customer be entitled to a GSS missed appointment payment?		
Possible answers		Answer
a)	The water undertaker's vehicle breaks down	
b)	Severe weather conditions	
c)	Industrial action	
d)	If the customer cancels the appointment	

Question 30		
A technician is attending to a burst which is causing supply issues.		
Which ONE of the following options is their course of action?		
Possible answers		Answer
a)	Go to the nearest customers house and take a sample	
b)	If possible, throttle the leak down to restore some supplies	
c)	Arrange for full Chapter 8 ready for the crew to arrive	
d)	Shut off the main immediately	

Question 31		
If a technician needs to deviate from the NJUG guidelines when installing new water services, whose authorisation is required?		
Possible answers		Answer
a)	The other utility provider	
b)	The site agent	
c)	The water undertaker	
d)	DWI	

Question 32		
What colour code is used for alternative water systems?		
Possible answers		Answer
a)	Black Green Black	
b)	Black Grey Green	
c)	Grey Black Grey	
d)	Green Black Green	

Question 33		
What precautions should a technician take when recharging a main?		
Possible answers		Answer
a)	Risk assess and then operate valves in a calm and controlled manner	
b)	Fit standpipe on hydrant, and open the hydrant to clear debris before flushing	
c)	Fit standpipe on hydrant to disperse the air and clear any discoloration. Check the supply has been restored and pressure has returned to normal	
d)	Inform control centre that the main is going to be returned to service	

Question 34		
What is the OFWAT requirement for pressure and flow at a single property (DG2)?		
Possible answers		Answer
a)	7 meters head at 10 litres per minute at the customers tap	
b)	10 meters head at 9 litres per minute at the customers tap	
c)	10 metres head at 9 litres per minute flow at the boundary	
d)	The customer has no visible water coming out of their first cold water tap when the tap is fully open	

Question 35		
What kind of lubricant can be used within the water industry?		
Possible answers		Answer
a)	WRAS Approved	
b)	OFWAT Approved	
c)	DWI Approved	
d)	British Standard 6500	

Question 36		
What is the maximum duration a hydrant wizard/line stop bag can be inflated for?		
Possible answers		Answer
a)	12 hours	
b)	8 hours	
c)	6 hours	
d)	3 hours	

Question 37		
What should a technician use to determine the size of a water main?		
Possible answers		Answer
a)	Callipers	
b)	Metre rule	
c)	A tape measure	
d)	Visual assessment	

Question 38		
How many turns would it take to close a standard 8 inch sluice valve from fully open?		
Possible answers		Answer
a)	15	
b)	16	
c)	17	
d)	18	

Question 39		
When grading the structural condition of pipework, which ONE of the following situations would be categorised grade 3?		
Possible answers		Answer
a)	No structural defects, cracks, or surface damage	
b)	Circumferential crack, multiple open or displaced joints, slight surface damage	
c)	Fractures, longitudinal or multiple cracks, severe joint defects, medium surface damage	
d)	Serious joint defects with visible voids, serious loss of level, deformations up to 10%	

Question 40		
What is the preferred method of cutting an asbestos main		
Possible answers		Answer
a)	Abrasive wheels	
b)	Hammer	
c)	Grinding wheel	
d)	Hand saw	

End of Sample Practice Assessment

Sample Practice Knowledge Assessment

Answer scheme

Question	Answer	Question	Answer
1	D	21	D
2	B	22	D
3	C	23	B
4	A	24	B
5	D	25	A
6	D	26	C
7	B	27	C
8	B	28	D
9	A	29	A
10	D	30	B
11	C	31	C
12	D	32	D
13	C	33	A
14	D	34	C
15	A	35	A
16	B	36	B
17	A	37	D
18	A	38	D
19	A	39	C
20	B	40	D