ENERGY & ENVIRONMENT AWARDS

EEA Level 3 End-point Assessment for Water Industry Asset Maintenance Technician
(Electrical; Mechanical; Instrumentation, control and automation)

Supporting Documents

QAN 610/6456/7
ST1404 V1.0

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Updates to the supporting documents

Since the first publication of Energy & Environment Awards Water Industry Asset Maintenance Technician (WIAMT) Supporting Documents, the following updates have been made.

Version	Date first published	Section updated	Page(s)
v2.0	June 2026	Update to Practice multiple-choice test	9 - 56
v1.0	January 2026	First published	All

Appendix A: Glossary

Amplification – provides more detail on how individual knowledge, skills or behaviours statements should be interpreted. Where the KSB statements, themselves are deemed self-explanatory, no amplification is provided. Assessment may include questions on anything identified in the amplification

Behaviours (as part of KSBs) – specific mindsets, attitudes or approaches identified as part of the apprenticeship standard that must be evidenced during end-point assessment

Elements – are the knowledge, skills and behaviours and what is needed to competently undertake the duties required for an occupational standard

Gateway - the stage of the apprenticeship where the apprentice, employer and training provider determine whether the apprentice is ready to undertake end-point assessment

Guidance – is only provided where it is required to support interpretation of the KSB statements

Knowledge (as part of KSBs) – specific information, technical detail, and 'know-how' identified as part of the apprenticeship standard that must be evidenced during end-point assessment

Skills (as part of KSBs) – the practical application of knowledge identified as part of the apprenticeship standard that must be evidenced during end-point assessment

Standard – An occupational standard is a description of an occupation. It contains occupational profile, and describes KSBs needed for someone to be competent in the occupation's duties. Occupational standards are developed by employers for occupations that meet the Skills England's current occupation criteria

Topic - is a collection of elements grouped into a theme e.g. Health and Safety

Appendix B: Gateway Eligibility Form

(Standard Version: ST1404 version 1.0)

Apprentice's name:	Apprentice's job title:
Apprentice's ULN:	
Name of Employer:	Name of Training provider:
Employer representatives present:	Training provider representatives present:
Apprenticeship start date:	Apprenticeship on-programme end date:
Was the apprentice aged 19 or over at the start of the programme?	Y / N
Employer Decision: We require the apprentice to attempt the Level 2 English and Mathematics before they can achieve the apprenticeship	Y / N
Gateway meeting date:	
Has the apprentice taken any part of the end-point assessment for this apprenticeship standard with any other End Point Assessment Organisation?	Y / N
If "Yes" please give details:	

Apprentice's details

Eligibility requirements:

Where applicable, the apprentice must confirm their achievement of the following
Note: If maths and/or English have been attempted but not achieved evidence of the attempt should be submitted.

Eligibility requirement	Achieved by the apprentice? Y / N	Evidence (Scans of certificates or ILR MUST be included)
Achieved an English qualification in line with the apprenticeship funding rules		
Achieved a mathematics qualification in line with the apprenticeship funding rules		

The apprentice must confirm the following:

Eligibility requirement	Achieved by the apprentice? Y / N	Evidence available in ACE360 Y / N
Compiled and submitted an EPA portfolio that meets the specification requirements, for the professional discussion based on an EPA portfolio		

Gateway Eligibility Declaration

The apprentice, the employer and the training provider must sign this form to confirm that they understand and agree to the following:

1. The apprentice has completed the required on-programme elements of the apprenticeship and is ready for end-point assessment with Energy & Environment Awards.
2. Energy & Environment Awards has been informed about any reasonable adjustment and/or special considerations requests.
3. The apprentice will only submit their own work as part of end-point assessment.
4. All parties agree that end-point assessment evidence may be recorded and stored by Energy & Environment Awards for quality assurance purposes.
5. The apprentice has been on-programme for the minimum duration required, in line with Skills England rules.
6. The apprentice is working at or above the occupational standard as a Water Industry Asset Maintenance Technician.
7. The apprentice has the evidence required to pass the gateway and is ready to take the EPA.
8. The apprentice has achieved English and maths in line with apprenticeship funding rules.
9. The apprentice has compiled and submitted a competent EPA portfolio of evidence, on which the interview will be based.
10. The apprentice, if successful, gives permission for Energy & Environment Awards to request the apprenticeship. certificate from the Department of Education who issue the certificate on behalf of the Secretary of State.
11. The apprentice has been directed to the Energy & Environment Awards Appeals Policy and Complaints Policy.
12. The employer/training provider has given the Energy & Environment Awards at least three months' notice of requesting this EPA for this apprentice.
13. If the Gateway Eligibility Report is not completed in full, meeting all requirements, and submitted to Energy & Environment Awards, the end-point assessment cannot take place.

Signed on behalf of the employer (print name):	Signature:	Date:
Signed on behalf of the training provider (print name):	Signature:	Date:
Apprentice's name (print):	Signature:	Date:
Energy & Environment Awards use only:		
Energy & Environment Awards Sign off:		
Comments/actions:		

Appendix C: Practice Multiple-choice Test

EEA L3 Water Industry Asset Maintenance Technician
Electrical
Multiple-choice Practice Paper

This examination consists of 30 multiple-choice questions.

The Pass mark is 24 correct answers.

The duration of this examination is 60 minutes.
You must use a **pencil** to complete the answer sheet - pens must NOT be used.
When completed, please leave the examination answer sheet and question paper on the desk.

For this paper:

- the use of a scientific calculator (non-programmable) is permitted
- access to the internet or intranet is NOT allowed

For each question, fill in ONE answer ONLY.
If you make a mistake, ensure you erase it thoroughly.

You must mark your choice of answer by shading in ONE answer circle only. Please mark each choice like this:

MARKING INSTRUCTIONS
Ⓐ Ⓑ Ⓒ ● **ANSWER COMPLETED CORRECTLY**
Examples of how NOT to mark your examination sheet. **These will not be recorded**
Ⓐ Ⓑ Ⓒ Ⓓ **DO NOT** partially shade the answer circle.
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Which ONE of the following organisations has powers to require water companies to make necessary improvements to the quality of tap water?	
Possible answers	
a)	Drinking Water Inspectorate (DWI)
b)	Health, Safety Executive (HSE)
c)	Office for Health Improvement and Disparities (OHID)
d)	World Health Organization (WHO)

Question 2	
It is the responsibility of the Environment Agency to investigate:	
Possible answers	
a)	a blocked sewer
b)	signs of a rat infestation
c)	incorrect disposal of litter
d)	a discharge of a hazardous substance into water

Question 3	
During periods of drought and low flow, raw water available for treatment is likely to:	
Possible answers	
a)	decrease in volume and quality
b)	increase in volume and quality
c)	decrease in volume and increase in quality
d)	Increase in volume and decrease in quality

Question 4	
What does BOD stand for?	
Possible answers	
a)	Biological Oxidation Demand
b)	Biochemical Oxygen Demand
c)	Biological Oxidation Demise
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Question 5	
Air locking in a diaphragm dosing pump would usually cause:	
Possible answers	
a)	no change in flow rate
b)	excessive chemical delivery
c)	reduced or interrupted chemical dosing
d)	immediate mechanical failure of the pump

Question 6	
The first step a technician should take if a chemical comes into contact with their skin is to:	
Possible answers	
a)	wipe the chemical off with a cloth
b)	report the incident to the site supervisor
c)	apply a neutralising chemical to the affected area
d)	use the emergency shower to wash the chemical off

Question 7	
According to the Personal Protective Equipment at Work Regulations (PPER) 1992, PPE should:	
Possible answers	
a)	clearly display the employer's name
b)	eliminate the need for other safety controls
c)	be used safely by anyone without prior knowledge
d)	fit the wearer correctly after necessary adjustments

Question 8	
According to the Confined Space Regulations 1997, which of the following locations is **NOT** regarded as a confined space?	
Possible answers	
a)	Termination cabinet
b)	Storage tank
c)	Pipe trench
d)	Floor void

Question 9	
According to the Health and Safety Executive (HSE), all workers must:	
Possible answers	
a)	pay for any training needed to work safely
b)	provide their own PPE (Personal Protective Equipment)
c)	work only under the supervision of a safety representative
d)	take care of others who may be affected by their actions

Question 10		
According to the Control of Substances Hazardous to Health (COSHH), this symbol tells you a substance is:		
Possible answers		
a)	toxic	
b)	an irritant	
c)	corrosive	
d)	hazardous to the environment	

Question 11	
Which ONE of the following workplace incidents is **NOT** reportable under Reporting of Injuries, Diseases and Dangerous Occurrences (RIDDOR)?	
Possible answers	
a)	Significant damage to a worker's eye
b)	Accident to a member of the public resulting in an injury
c)	Hypothermia as a result of working in an enclosed space
d)	A cut to an employee's hand requiring medical attention by a site first aider

Question 12	
When do the Pressure System Safety Regulations (PSSR) apply for systems and equipment using steam?	
Possible answers	
a)	When steam is expected to exceed 0.5 bar above atmospheric pressure
b)	When steam is expected to exceed 1 bar above atmospheric pressure
c)	When steam is expected to exceed 1.5 bar above atmospheric pressure
d)	When steam is at any pressure

Question 13	
In accordance with HSE guidelines, isolations can only be applied by people who are:	
Possible answers	
a)	trained and authorised
b)	experienced
c)	competent
d)	skilled

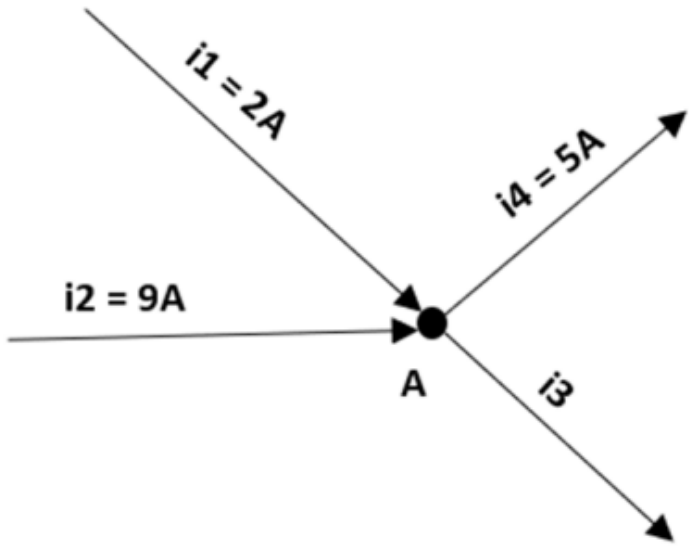
Question 14	
Which ONE of the following statements about manual handling true?	
Possible answers	
a)	Correct manual handling prevents all accidents
b)	Correct manual handling prevents damage to equipment
c)	Correct manual handling reduces the risk of human injury
d)	Correct manual handling should only be applied in the workplace

Question 15	
Who is responsible for ensuring monitoring equipment and personnel are compliant with MCERTS (Monitoring Certification Scheme for Environmental Measurements)?	
Possible answers	
a)	Permit holder
b)	Site supervisor
c)	Chemical supplier
d)	Equipment manufacturer

Question 16	
According to the Waste Electrical and Electronic Equipment (WEEE) Regulations, which types of electrical and electronic equipment are covered for collection, recycling and disposal?	
Possible answers	
a)	Only electrical and electronic equipment that no longer works
b)	Any domestic and commercial electrical and electronic equipment
c)	Any electrical and electronic components containing hazardous substances
d)	Domestic and commercial electrical and electronic equipment above a certain value

Question 17	
An electrical conductor is a material which:	
Possible answers	
a)	has reflective properties
b)	maximises the voltage drop in a circuit
c)	is used to join electrical components together
d)	allows current to flow with minimal resistance

[Turn to the next page for question 18]

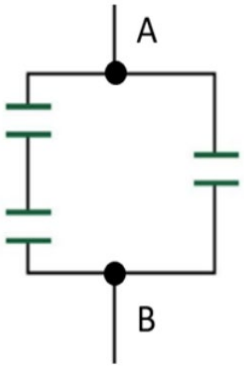
Question 18	
Applying Kirchhoff's Current Law to the circuit in the image, calculate i3 considering the inputs and outputs from node A. 	
Possible answers	
a)	4A
b)	6A
c)	12A
d)	16A

Question 19	
Using Ohm's Law, what is the approximate power rating (in kilowatts) of a failed heating element supplied at 230V, if its resistance was measured at 26.2 ohms during installation? Round answer to the nearest kilowatt.	
Possible answers	
a)	3kW
b)	2.5kW
c)	2kW
d)	1.5kW

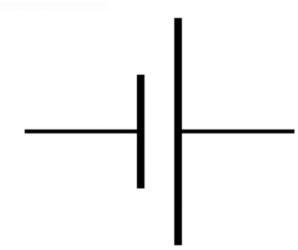
Question 20	
Which ONE of the following best describes the primary purpose of a transformer in a circuit?	
Possible answers	
a)	Protects from overcurrent
b)	Change voltage level
c)	Inrush current limiter
d)	Converts AC to DC

Question 21	
Which ONE of the following circuit types allows current to flow through multiple paths?	
Possible answers	
a)	Parallel circuit
b)	Series circuit
c)	Open circuit
d)	Short circuit

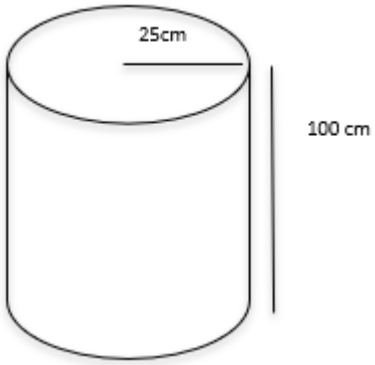
Question 22	
In a three-phase power system, how many degrees apart are each phase?	
Possible answers	
a)	60^{O}
b)	90^{O}
c)	120^{O}
d)	180^{O}

Question 23	
Identify the electrical components in the circuit diagram between point A and B.  	
Possible answers	
a)	Capacitors
b)	Resistors
c)	Inductors
d)	Diodes

Question 24	
Which type of diagram provides a visual and simplified representation of a system's components and interconnections?	
Possible answers	
a)	Loop diagram
b)	Schematic diagram
c)	Block diagram
d)	Wiring diagram

Question 25	
On an electrical drawing, the symbol below represents a: 	
a)	transformer
b)	resistor
c)	battery
d)	fuse

Question 26	
Which type of technical drawing is most useful to a technician during a fault-finding exercise to understand connection details between components?	
Possible answers	
a)	Single line diagram
b)	Layout diagram
c)	Wiring diagram
d)	Block diagram

Question 27	
A tank has a height of 100 cm and radius of 25 cm.  Calculate the surface area, give your answer to 2 decimal places	
Possible answers	
a)	0.79 m^2
b)	1.96 m^2
c)	7.85 m^2
d)	19.63 m^2

Question 28	
A chemical dosing pump delivers 0.00045 m^3/s of solution to a treatment process. How can this be expressed in scientific notation?	
Possible answers	
a)	4.5×10^{-3} m^3/s
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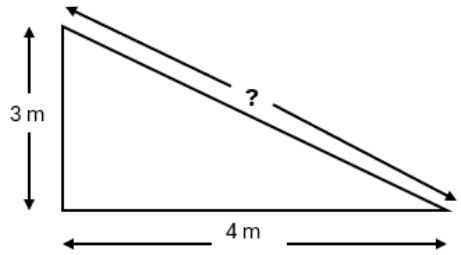
A technician needs to install ducting along a trench measuring 4 m by 3 m.  Using Pythagoras' theorem, calculate the length of ducting required.	
Possible answers	
a)	4 m
b)	5 m
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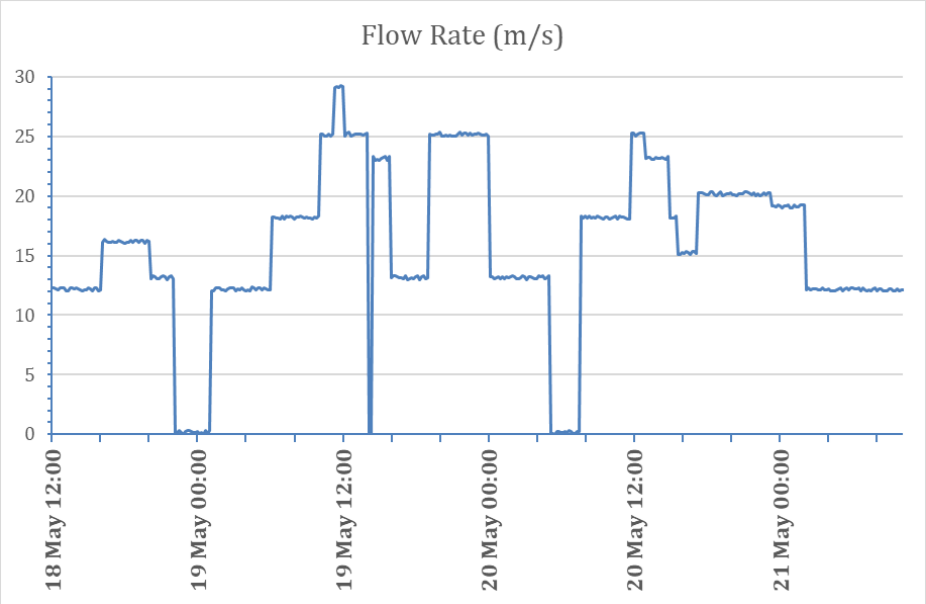
d)	7 m

[Turn to the next page for question 30]

Question 30
Refer to the trend analysis snapshot below of a pumping station. On what day did the maximum flow rate occur?   

Possible answers	
a)	18 May
b)	19 May
c)	20 May
d)	21 May

End of Questions.

Practice Multiple-choice Test

Answer scheme

Question	Answer	Question	Answer
1	A	16	B
2	D	17	D
3	A	18	B
4	B	19	C
5	C	20	B
6	D	21	A
7	D	22	C
8	A	23	A
9	D	24	C
10	A	25	C
11	D	26	C
12	D	27	B
13	A	28	B
14	C	29	B
15	A	30	B

EEA L3 Water Industry Asset Maintenance Technician
Mechanical
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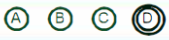 **DO NOT** use circles.
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Question 17	
The maintenance schedule specifies a system pressure of **10.00 bar ± 0.05 bar**. What are the minimum and maximum acceptable pressures?	
Possible answers	
a)	9.95 to 10.05 bar
b)	9.5 to 10.5 bar
c)	9.05 to 10.5 bar
d)	9.005 to 10.005 bar

Question 18	
The primary function of a gearbox in a mechanical system is to:	
Possible answers	
a)	maintain temperature and prevent overheating
b)	change speed and torque ratios
c)	regulate hydraulic flow
d)	increase fluid pressure

Question 19	
The part of a gearbox which directly determines the gear ratio is the:	
Possible answers	
a)	number of teeth on each gear
b)	diameter of the shafts
c)	type of lubricant used
d)	size of the bearings

Question 20	
The service factor on a motor specification plate indicates the:	
Possible answers	
a)	lubrication interval
b)	allowable overload
c)	shaft alignment tolerance
d)	maximum operating temperature

Question 21	
Which scientific rule explains how hydraulic systems can lift heavy loads by transmitting pressure through a confined fluid?	
Possible answers	
a)	Bernoulli’s principle
b)	Boyle’s law
c)	Pascal’s law
d)	Newton’s third law

Question 22	
Which ONE of the following machines is **MOST** suitable for creating a component with a flat surface?	
Possible answers	
a)	Lathe
b)	Milling machine
c)	Pillar drill
d)	Threading machine

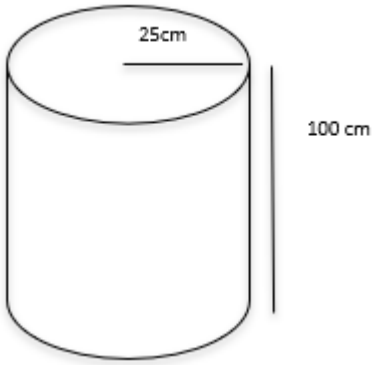
Question 23	
When a technician is using a mechanical saw to cut a length of metal, which ONE of the following is an immediate hazard?	
Possible answers	
a)	Noise levels increasing while the saw is under load
b)	Vibration from the saw affecting the stability of the cut
c)	Heat building up in the blade during the cutting operation
d)	Hot chips and small particles being thrown from the cutting area

Question 24	
The machine most commonly used to cut external threads on a mechanical component is a:	
Possible answers	
a)	lathe
b)	pillar drill
c)	mechanical saw
d)	milling machine

Question 25	
Which ONE of the following metals requires the slowest cutting speed when using a pillar drill?	
Possible answers	
a)	Aluminium
b)	Brass
c)	Copper
d)	Stainless steel

Question 26	
A gearbox has an input speed of 1500rpm and an output speed of 300rpm. What is the gear ratio?	
Possible answers	
a)	1:3
b)	3:1
c)	1:5
d)	5:1

[Turn to the next page for question 27]

Question 27	
A tank has a height of 100 cm and radius of 25 cm.  Calculate the surface area, round your answer to 2 decimal places	
Possible answers	
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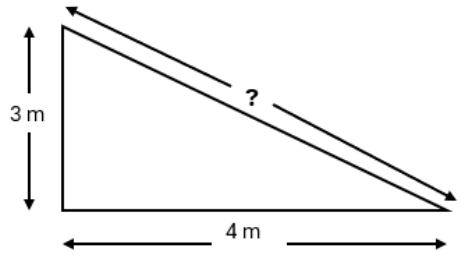
A technician needs to install ducting along a trench measuring 4 m by 3 m.  Using Pythagoras' theorem, calculate the length of ducting required.	
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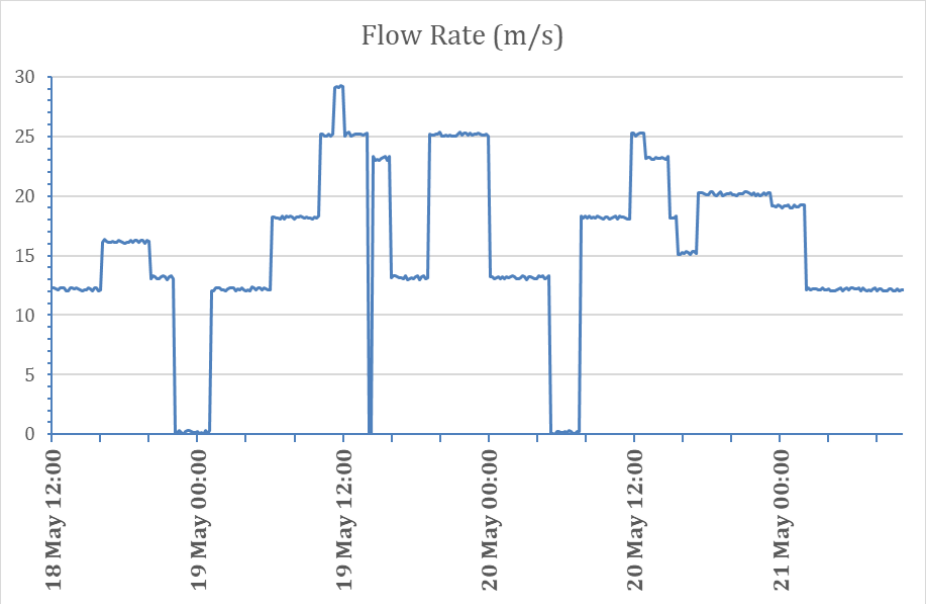
[Turn to the next page for question 30]

Question 30
Refer to the trend analysis snapshot below of a pumping station. On what day did the maximum flow rate occur?   

Possible answers	
a)	18 May
b)	19 May
c)	20 May
d)	21 May

End of Questions.

Practice Multiple-choice Test

Answer scheme

Question	Answer	Question	Answer
1	A	16	B
2	D	17	A
3	A	18	B
4	B	19	A
5	C	20	B
6	D	21	C
7	D	22	B
8	A	23	D
9	D	24	A
10	A	25	D
11	D	26	D
12	D	27	B
13	A	28	B
14	C	29	B
15	A	30	B

EEA L3 Water Industry Asset Maintenance Technician
Instrumentation, control and automation
Multiple-choice Practice Paper

This examination consists of 30 multiple-choice questions.

The Pass mark is 24 correct answers.

The duration of this examination is 60 minutes.
You must use a **pencil** to complete the answer sheet - pens must NOT be used.
When completed, please leave the examination answer sheet and question paper on the desk.

For this paper:

- the use of a scientific calculator (non-programmable) is permitted
- access to the internet or intranet is NOT allowed

For each question, fill in ONE answer ONLY.
If you make a mistake, ensure you erase it thoroughly.

You must mark your choice of answer by shading in ONE answer circle only. Please mark each choice like this:

MARKING INSTRUCTIONS
Ⓐ Ⓑ Ⓒ ● **ANSWER COMPLETED CORRECTLY**
Examples of how NOT to mark your examination sheet. **These will not be recorded**
Ⓐ Ⓑ Ⓒ Ⓓ **DO NOT** partially shade the answer circle.
Ⓐ Ⓑ ✓ ✗ **DO NOT** use ticks or crosses.
Ⓐ Ⓑ Ⓒ Ⓓ **DO NOT** use circles.
Ⓐ Ⓑ ● ● **DO NOT** shade over more than one circle.

You may use this page for rough work. This page must not be removed.

Question 1	
Which ONE of the following organisations has powers to require water companies to make necessary improvements to the quality of tap water?	
Possible answers	
a)	Drinking Water Inspectorate (DWI)
b)	Health, Safety Executive (HSE)
c)	Office for Health Improvement and Disparities (OHID)
d)	World Health Organization (WHO)

Question 2	
It is the responsibility of the Environment Agency to investigate:	
Possible answers	
a)	a blocked sewer
b)	signs of a rat infestation
c)	incorrect disposal of litter
d)	a discharge of a hazardous substance into water

Question 3	
During periods of drought and low flow, raw water available for treatment is likely to:	
Possible answers	
a)	decrease in volume and quality
b)	increase in volume and quality
c)	decrease in volume and increase in quality
d)	Increase in volume and decrease in quality

Question 4	
What does BOD stand for?	
Possible answers	
a)	Biological Oxidation Demand
b)	Biochemical Oxygen Demand
c)	Biological Oxidation Demise
d)	Biochemical Oxygen Demise

Question 5	
Air locking in a diaphragm dosing pump would usually cause:	
Possible answers	
a)	no change in flow rate
b)	excessive chemical delivery
c)	reduced or interrupted chemical dosing
d)	immediate mechanical failure of the pump

Question 6	
The first step a technician should take if a chemical comes into contact with their skin is to:	
Possible answers	
a)	wipe the chemical off with a cloth
b)	report the incident to the site supervisor
c)	apply a neutralising chemical to the affected area
d)	use the emergency shower to wash the chemical off

Question 7	
According to the Personal Protective Equipment at Work Regulations (PPER) 1992, PPE should:	
Possible answers	
a)	clearly display the employer's name
b)	eliminate the need for other safety controls
c)	be used safely by anyone without prior knowledge
d)	fit the wearer correctly after necessary adjustments

Question 8	
According to the Confined Space Regulations 1997, which of the following locations is **NOT** regarded as a confined space?	
Possible answers	
a)	Termination cabinet
b)	Storage tank
c)	Pipe trench
d)	Floor void

Question 9	
According to the Health and Safety Executive (HSE), all workers must:	
Possible answers	
a)	pay for any training needed to work safely
b)	provide their own PPE (Personal Protective Equipment)
c)	work only under the supervision of a safety representative
d)	take care of others who may be affected by their actions

Question 10		
According to the Control of Substances Hazardous to Health (COSHH), this symbol tells you a substance is:		
Possible answers		
a)	toxic	
b)	an irritant	
c)	corrosive	
d)	hazardous to the environment	

Question 11	
Which ONE of the following workplace incidents is **NOT** reportable under Reporting of Injuries, Diseases and Dangerous Occurrences (RIDDOR)?	
Possible answers	
a)	Significant damage to a worker's eye
b)	Accident to a member of the public resulting in an injury
c)	Hypothermia as a result of working in an enclosed space
d)	A cut to an employee's hand requiring medical attention by a site first aider

Question 12	
When do the Pressure System Safety Regulations (PSSR) apply for systems and equipment using steam?	
Possible answers	
a)	When steam is expected to exceed 0.5 bar above atmospheric pressure
b)	When steam is expected to exceed 1 bar above atmospheric pressure
c)	When steam is expected to exceed 1.5 bar above atmospheric pressure
d)	When steam is at any pressure

Question 13	
In accordance with HSE guidelines, isolations can only be applied by people who are:	
Possible answers	
a)	trained and authorised
b)	experienced
c)	competent
d)	skilled

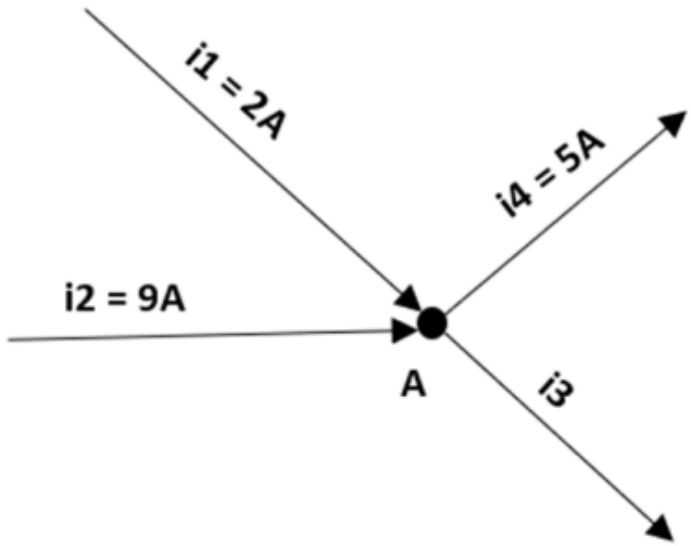
Question 14	
Which ONE of the following statements about manual handling true?	
Possible answers	
a)	Correct manual handling prevents all accidents
b)	Correct manual handling prevents damage to equipment
c)	Correct manual handling reduces the risk of human injury
d)	Correct manual handling should only be applied in the workplace

Question 15	
Who is responsible for ensuring monitoring equipment and personnel are compliant with MCERTS (Monitoring Certification Scheme for Environmental Measurements)?	
Possible answers	
a)	Permit holder
b)	Site supervisor
c)	Chemical supplier
d)	Equipment manufacturer

Question 16	
According to the Waste Electrical and Electronic Equipment (WEEE) Regulations, which types of electrical and electronic equipment are covered for collection, recycling and disposal?	
Possible answers	
a)	Only electrical and electronic equipment that no longer works
b)	Any domestic and commercial electrical and electronic equipment
c)	Any electrical and electronic components containing hazardous substances
d)	Domestic and commercial electrical and electronic equipment above a certain value

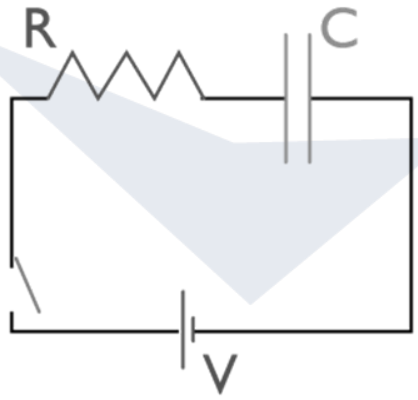
Question 17	
An electrical conductor is a material which:	
Possible answers	
a)	has reflective properties
b)	maximises the voltage drop in a circuit
c)	is used to join electrical components together
d)	allows current to flow with minimal resistance

[Turn to the next page for question 18]

Question 18	
Applying Kirchhoff's Current Law to the circuit in the image, calculate i3 considering the inputs and outputs from node A. 	
Possible answers	
a)	4A
b)	6A
c)	12A
d)	16A

Question 19	
Using Ohm's Law, what is the approximate power rating (in kilowatts) of a failed heating element supplied at 230V, if its resistance was measured at 26.2 ohms during installation? Round answer to the nearest kilowatt.	
Possible answers	
a)	3kW
b)	2.5kW
c)	2kW
d)	1.5kW

Question 20	
Which ONE of the following best describes the primary purpose of a transformer in a circuit?	
Possible answers	
a)	Protects from overcurrent
b)	Change voltage level
c)	Inrush current limiter
d)	Converts AC to DC

Question 21	
In the diagram below if the resistance is 50 kΩ and the capacitance is 5 µF. What is the time constant?  	
Possible answers	
a)	0.1 seconds
b)	0.15 seconds
c)	0.20 seconds
d)	0.25 seconds

Question 22	
In a three-phase power system, how many degrees apart are each phase?	
Possible answers	
a)	60^{O}
b)	90^{O}
c)	120^{O}
d)	180^{O}

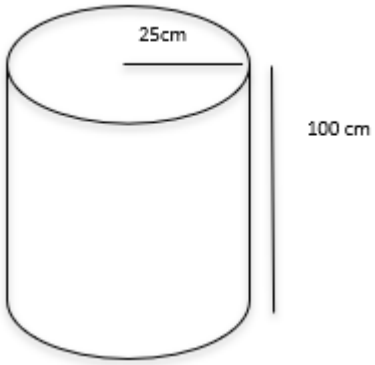
Question 23	
The pipework of a water treatment system has a cross-sectional area of $1.25m^2$ and a fluid velocity of 2m/s. What flow rate will be shown on the volumetric flow meter display?	
Possible answers	
a)	$2.5m^3/s$
b)	$2m^3/s$
c)	$1.6m^3/s$
d)	$1.25m^3/s$

Question 24	
A three-term controller employs PID in order to apply accurate and responsive correction to a control function. What does PID stand for?	
Possible answers	
a)	Power, immediate, direct
b)	Pipeline, invertor, downstream
c)	Proportional, integral, derivative
d)	Pneumatic, intermediate, damping

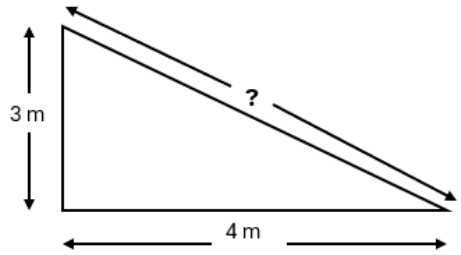
Question 25	
When testing analogue inputs on telemetry systems across a 4–20 mA range, input signals should be tested at points equivalent to 0, 25, 50, 75 and 100% for:	
Possible answers	
a)	rising only
b)	rising and falling
c)	falling only
d)	rising twice

Question 26	
In a pH analyser, which ONE of the following electrodes provides a constant voltage which allows the meter to measure the variable voltage via a second sensor?	
Possible answers	
a)	Reference
b)	Continuous
c)	Standard
d)	Sensing

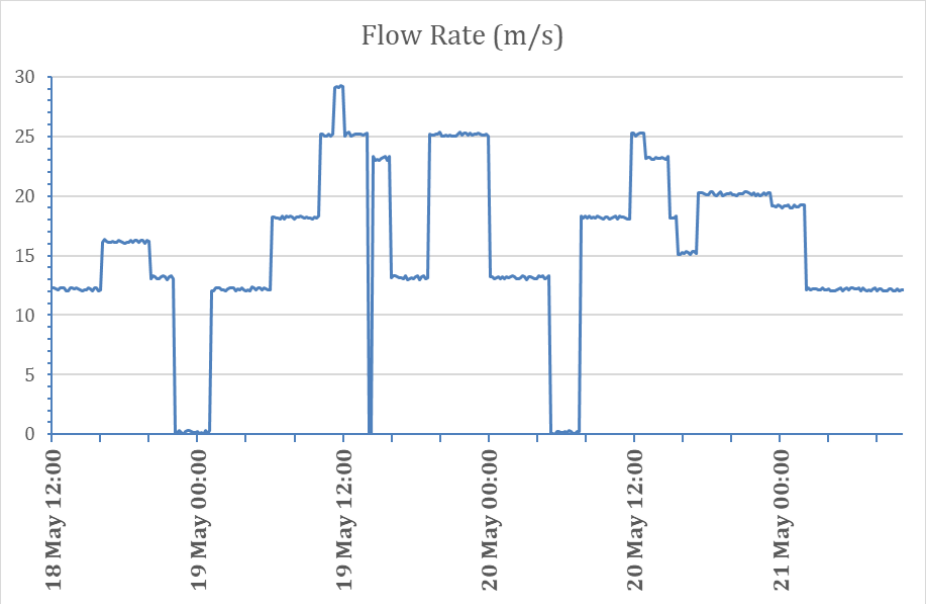
[Turn to the next page for question 27]

Question 27	
A tank has a height of 100 cm and radius of 25 cm.  Calculate the surface area, round your answer to 2 decimal places	
Possible answers	
a)	0.79 m^2
b)	1.96 m^2
c)	7.85 m^2
d)	19.63 m^2

Question 28	
A chemical dosing pump delivers 0.00045 m^3/s of solution to a treatment process. How can this be expressed in scientific notation?	
Possible answers	
a)	4.5×10^{-3} m^3/s
b)	4.5×10^{-4} m^3/s
c)	4.5×10^{3} m^3/s
d)	4.5×10^{4} m^3/s

Question 29	
A technician needs to install ducting along a trench measuring 4 m by 3 m.  Using Pythagoras' theorem, calculate the length of ducting required.	
Possible answers	
a)	4 m
b)	5 m
c)	6 m
d)	7 m

[Turn to the next page for question 30]

Question 30
Refer to the trend analysis snapshot below of a pumping station. On what day did the maximum flow rate occur?   

Possible answers	
a)	18 May
b)	19 May
c)	20 May
d)	21 May

End of Questions.

Practice Multiple-choice Test

Answer scheme

Question	Answer	Question	Answer
1	A	16	B
2	D	17	D
3	A	18	B
4	B	19	C
5	C	20	B
6	D	21	D
7	D	22	C
8	A	23	A
9	D	24	C
10	A	25	B
11	D	26	A
12	D	27	B
13	A	28	B
14	C	29	B
15	A	30	B

Appendix D - Level 3 Water Industry Asset Maintenance Technician Observation with Questions Planning and Approval Form

Instructions

This form has two purposes:

1. To help you plan an observation with questions for your apprentices
2. To inform Energy & Environment Awards of the proposed task(s) for the live assessment

Important information

- The apprentice is assessed in a normal working environment, approved by Energy & Environment Awards, which relates to the apprentice's natural working environment
- A total of 4 hours + 10% is permitted for the observation with questions
- The observation is assessed by an Energy & Environment Awards approved independent assessor
- The ratio of assessor to apprentice is 1:1
- The employer/provider must provide all tools and consumables, ensuring that tools are in a serviceable condition
- The employer/training provider representative must be present or immediately contactable for the duration of the assessment
- During the assessment, the independent assessor will be asking questions which are part of the assessment

The activities should be designed to assess a broad range of the knowledge, skills and behaviours developed over the period of the apprenticeship. However, as a minimum the observation with questions must cover the activities and KSBs listed in the planning and approval form below.

Energy & Environment Awards must review the employer/training provider's observation task brief.

Task variations: If you have more than one apprentice being assessed, use the 'Practical Task Variations' section of the form to indicate what the task variations that will be put in place so that apprentices are not asked to complete identical tasks.

Complete the ‘Level 3 Water Industry Asset Maintenance Technician Observation with Questions Planning and Approval Form’ and submit it to the Service Delivery team via enquiries@energyenvironmentawards.co.uk, for **review at least 1 month before the start** of the end-point assessment.

Further details can be found in the WIAMT EPA Specification.

Level 3 Water Industry Asset Maintenance Technician

Observation with Questions Planning and Approval Form - Electrical

Employers/training providers are recommended to arrange for apprentices to carry out a practice practical assessment prior to end-point assessment. The form below is for the use of the training provider setting up the practical assessment.

Employer name and site address	
Training provider (if applicable)	
Contact details of Employer/training provider representative, email address and contact number overseeing the setup of the practical (documents and site).	

Observation with Questions Checklist

This checklist will assist the employer and/or training provider with planning and discussing the activity with Energy & Environment Awards. **Please confirm all required elements are covered**:

The task(s) that the apprentice will undertake MUST include the following core and pathway specific activities:	
Core	
Preparation of resources for work	☐
Health and safety compliance	☐
Completion of documentation and written communication	☐
Electrical	
Repair or Maintenance activities	☐

Brief task(s) description:
Box will expand to allow further detail

Special requirements and site access arrangements for the assessor: Box will expand to allow further detail

The following requirements should be covered in the activity:

Prepare for work (Core)	Describe where in the activity the independent assessor will observe the requirements
S3: Identify and organise resources to complete tasks, with consideration for process, cost, quality, safety, security and environmental impact.	

Health and Safety (Core)	Describe where in the activity the independent assessor will observe the requirements
K7: Safe systems of work.	
S4: Follow health and safety procedures and safe systems of work in compliance with regulations and standards, including PPE.	
S7: Restore the work area on completion of the activity.	
B1: Take responsibility for and promotes health, safety and wellbeing for self, others, site and assets.	

Documentation and written communication (Core)	Describe where in the activity the independent assessor will observe the requirements
K15: Written communication and documentation: methods and requirements - electronic and paper. Service records. Test results.	
S8: Communicate in writing and record or enter information - paper based or electronic. For example, job sheets, risk assessments, equipment service	

records, test results, handover documents and manufacturers' documentation, asset management records, work sheets, checklists, waste environmental records and legal reporting requirements.	

Repair or maintenance (Electrical)	Describe where in the activity the independent assessor will observe the requirements
K38: Safe isolation of plant and electrical equipment in preparation for repair and maintenance work. Permits, safe isolation policies and procedures, lock off systems.	
K42: Tools, equipment, resources and components used for the installation, repair and maintenance of electrical systems. Application, operation, care and calibration requirements.	
K44: Inspection and testing requirements and techniques.	
K45: Repair and maintenance of equipment and components. Practices and techniques. Removing and replacing parts.	
S33: Apply electrical theories and principles.	
S34: Apply repair and maintenance practices and techniques.	
S38: Use tools, equipment, resources and components for installation, repair and maintenance.	
S39: Isolate equipment in preparation for maintenance work, including permits, safe isolation policies and lock off systems.	
S40: Inspect and test electrical installations and equipment.	

Practical Task Variations
Describe how you can vary the task(s) to ensure that the task does not become predictable. **Variation 1:** **Variation 2:** **Variation 3:**
Special requirements (for example: authorisations/access arrangements/PPE):

IMPORTANT INFORMATION TO REMEMBER: The specific detail of the task(s) to be undertaken should be **kept confidential from the apprentices.**

Practical task(s): include relevant photographs to illustrate task(s) to be discussed and reviewed

Energy & Environment Awards Office use only

Date received	
Date signed off	

Level 3 Water Industry Asset Maintenance Technician

Observation with Questions Planning and Approval Form - Mechanical

Employers/training providers are recommended to arrange for apprentices to carry out a practice practical assessment prior to end-point assessment. The form below is for the use of the training provider setting up the practical assessment.

Employer name and site address	
Training provider (if applicable)	
Contact details of Employer/training provider representative, email address and contact number overseeing the setup of the practical (documents and site).	

Observation with Questions Checklist

This checklist will assist the employer and/or training provider with planning and discussing the activity with Energy & Environment Awards. **Please confirm all required elements are covered**:

The task(s) that the apprentice will undertake MUST include the following core and pathway specific activities:	
Core	
Preparation of resources for work	☐
Health and safety compliance	☐
Completion of documentation and written communication	☐
Mechanical	
Repair or Maintenance activities	☐

Brief task(s) description:
Box will expand to allow further detail

Special requirements and site access arrangements for the assessor: Box will expand to allow further detail

The following requirements should be covered in the activity:

Prepare for work (Core)	Describe where in the activity the independent assessor will observe the requirements
S3: Identify and organise resources to complete tasks, with consideration for process, cost, quality, safety, security and environmental impact.	

Health and Safety (Core)	Describe where in the activity the independent assessor will observe the requirements
K7: Safe systems of work.	
S4: Follow health and safety procedures and safe systems of work in compliance with regulations and standards, including PPE.	
S7: Restore the work area on completion of the activity.	
B1: Take responsibility for and promotes health, safety and wellbeing for self, others, site and assets.	

Documentation and written communication (Core)	Describe where in the activity the independent assessor will observe the requirements
K15: Written communication and documentation: methods and requirements - electronic and paper. Service records. Test results.	
S8: Communicate in writing and record or enter information - paper based or electronic. For example, job sheets, risk assessments, equipment service records, test results, handover documents and manufacturers'	

documentation, asset management records, work sheets, checklists, waste environmental records and legal reporting requirements.	

Repair or maintenance (Mechanical)	Describe where in the activity the independent assessor will observe the requirements
K24: Safe isolation and depressurisation of mechanical plant and equipment in preparation for repair and maintenance work. Permits, safe isolation policies and procedures, lock off systems.	
K26: Repair and maintenance of machinery, equipment and components. Practices and techniques. Removing and replacing parts, set up, adjustment, cleaning and lubricating.	
K27: Tools, equipment, resources and components used for the installation, repair and maintenance of mechanical systems. Application, operation, care and calibration requirements.	
K29: Inspection, monitoring and testing requirements and techniques.	
S18: Disconnect and remove mechanical equipment or components.	
S19: Apply repair and maintenance practices and techniques.	
S20: Use tools, equipment, resources and components for installation, repair and maintenance tasks.	
S21: Isolate plant and equipment in preparation for maintenance work, including permits, safe isolation policies, lock off systems and depressurisation of pressurised systems.	
S22: Inspect and test mechanical systems and components.	
S24: Carry out inspection and monitoring of mechanical systems and equipment.	

S30: Apply mechanical theories and principles.	

Practical Task Variations
Describe how you can vary the task(s) to ensure that the task does not become predictable. **Variation 1:** **Variation 2:** **Variation 3:**
Special requirements (for example: authorisations/access arrangements/PPE):

IMPORTANT INFORMATION TO REMEMBER: The specific detail of the task(s) to be undertaken should be **kept confidential from the apprentices.**

Practical task(s): include relevant photographs to illustrate task(s) to be discussed and reviewed

Energy & Environment Awards Office use only

Date received	
Date signed off	

Level 3 Water Industry Asset Maintenance Technician Observation with Questions Planning and Approval Form - Instrumentation, control and automation

Employers/training providers are recommended to arrange for apprentices to carry out a practice practical assessment prior to end-point assessment. The form below is for the use of the training provider setting up the practical assessment.

Employer name and site address	
Training provider (if applicable)	
Contact details of Employer/training provider representative, email address and contact number overseeing the setup of the practical (documents and site).	

Observation with Questions Checklist

This checklist will assist the employer and/or training provider with planning and discussing the activity with Energy & Environment Awards. **Please confirm all required elements are covered**:

The task(s) that the apprentice will undertake MUST include the following core and pathway specific activities:	
Core	
Preparation of resources for work	☐
Health and safety compliance	☐
Completion of documentation and written communication	☐
Instrumentation, Control and Automation (ICA)	
Configuration and calibration activities	☐
Repair or Maintenance activities	☐

Brief task(s) description:
Box will expand to allow further detail

Special requirements and site access arrangements for the assessor: Box will expand to allow further detail

The following requirements should be covered in the activity:

Prepare for work (Core)	Describe where in the activity the independent assessor will observe the requirements
S3: Identify and organise resources to complete tasks, with consideration for process, cost, quality, safety, security and environmental impact.	

Health and Safety (Core)	Describe where in the activity the independent assessor will observe the requirements
K7: Safe systems of work.	
S4: Follow health and safety procedures and safe systems of work in compliance with regulations and standards, including PPE.	
S7: Restore the work area on completion of the activity.	
B1: Take responsibility for and promotes health, safety and wellbeing for self, others, site and assets.	

Documentation and written communication (Core)	Describe where in the activity the independent assessor will observe the requirements
K15: Written communication and documentation: methods and requirements - electronic and paper. Service records. Test results.	
S8: Communicate in writing and record or enter information - paper based or electronic. For example, job sheets, risk assessments, equipment service records, test results, handover documents and manufacturers'	

documentation, asset management records, work sheets, checklists, waste environmental records and legal reporting requirements.	

Configure and calibrate (Instrumentation, control and automation)	Describe where in the activity the independent assessor will observe the requirements
K54: Open and closed loop systems. First and second order control systems.	
K62: Configuration and calibration procedures and requirements. Precision and tolerance.	
S47: Configure instrumentation and control devices.	
S48: Calibrate and monitor open and closed loop systems.	
S55: Calibrate ICA equipment.	

Repair and maintenance (Instrumentation, control and automation)	Describe where in the activity the independent assessor will observe the requirements
K52: Repair and maintenance of instruments, controllers, sensors, probes, attachments, cabling, meters and display units. Practices and techniques.	
K55: Safe isolation of plant and ICA equipment in preparation for repair and maintenance work. Permits, safe isolation policies, lock off systems.	
K56: Tools, equipment, resources and components used for the installation, repair and maintenance of control systems. Application, operation, care and calibration requirements.	
K59: Inspection and testing requirements and techniques.	
S45: Apply electrical theories and principles.	

S49: Use tools, equipment, resources and components for installation, repair and maintenance.	
S51: Apply repair and maintenance practices and techniques to instrumentation and control equipment, control systems and cabling.	
S53: Inspect and test ICA equipment.	
S57: Isolate equipment in preparation for maintenance work, including permits, safe isolation policies and lock off systems.	
S61: Assess condition of equipment. Identify action required.	

Practical Task Variations
Describe how you can vary the task(s) to ensure that the task does not become predictable. **Variation 1:** **Variation 2:** **Variation 3:**
Special requirements (for example: authorisations/access arrangements/PPE):

IMPORTANT INFORMATION TO REMEMBER: The specific detail of the task(s) to be undertaken should be **kept confidential from the apprentices.**

Practical task(s): include relevant photographs to illustrate task(s) to be discussed and reviewed

Energy & Environment Awards Office use only

Date received	
Date signed off	

Appendix E: Practice Observation with questions Template

Employers/training providers are recommended to arrange for apprentices to carry out a practice observation with questions prior to end-point assessment. The form below is for use by the person playing the part of the independent assessor.

Instructions

This should be read in conjunction with the WIAMT Specification.

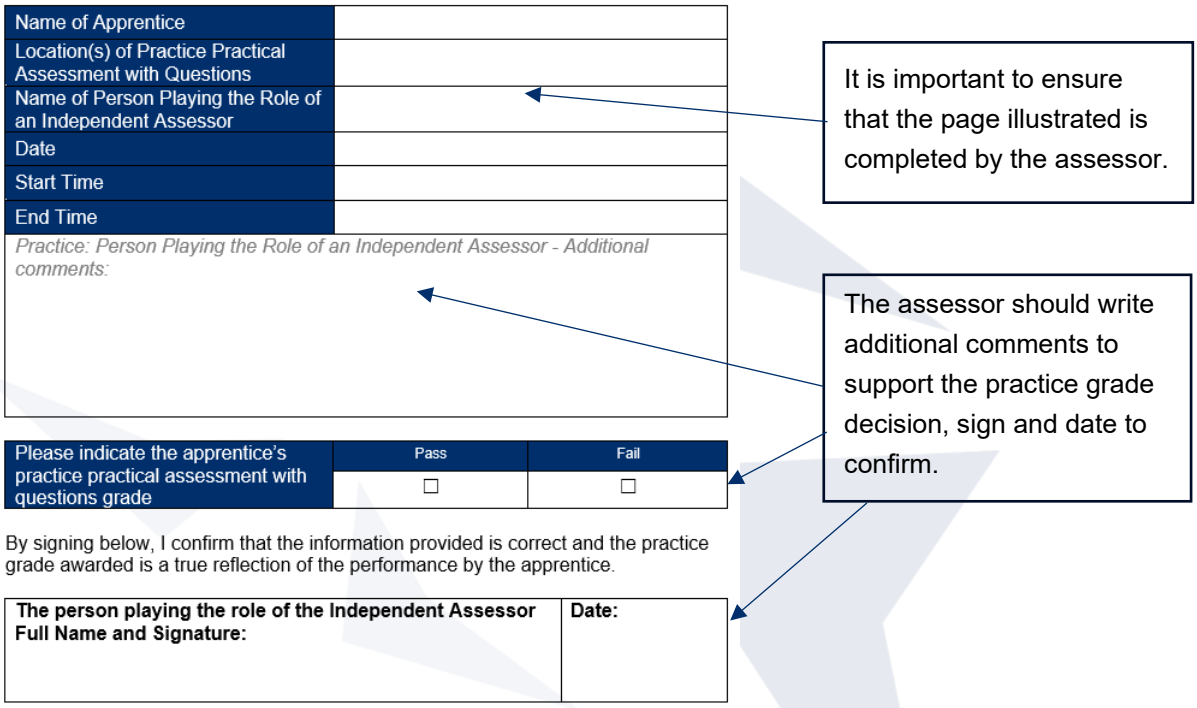
This template has been designed to help the suitable person playing part of the independent assessor and has three purposes:

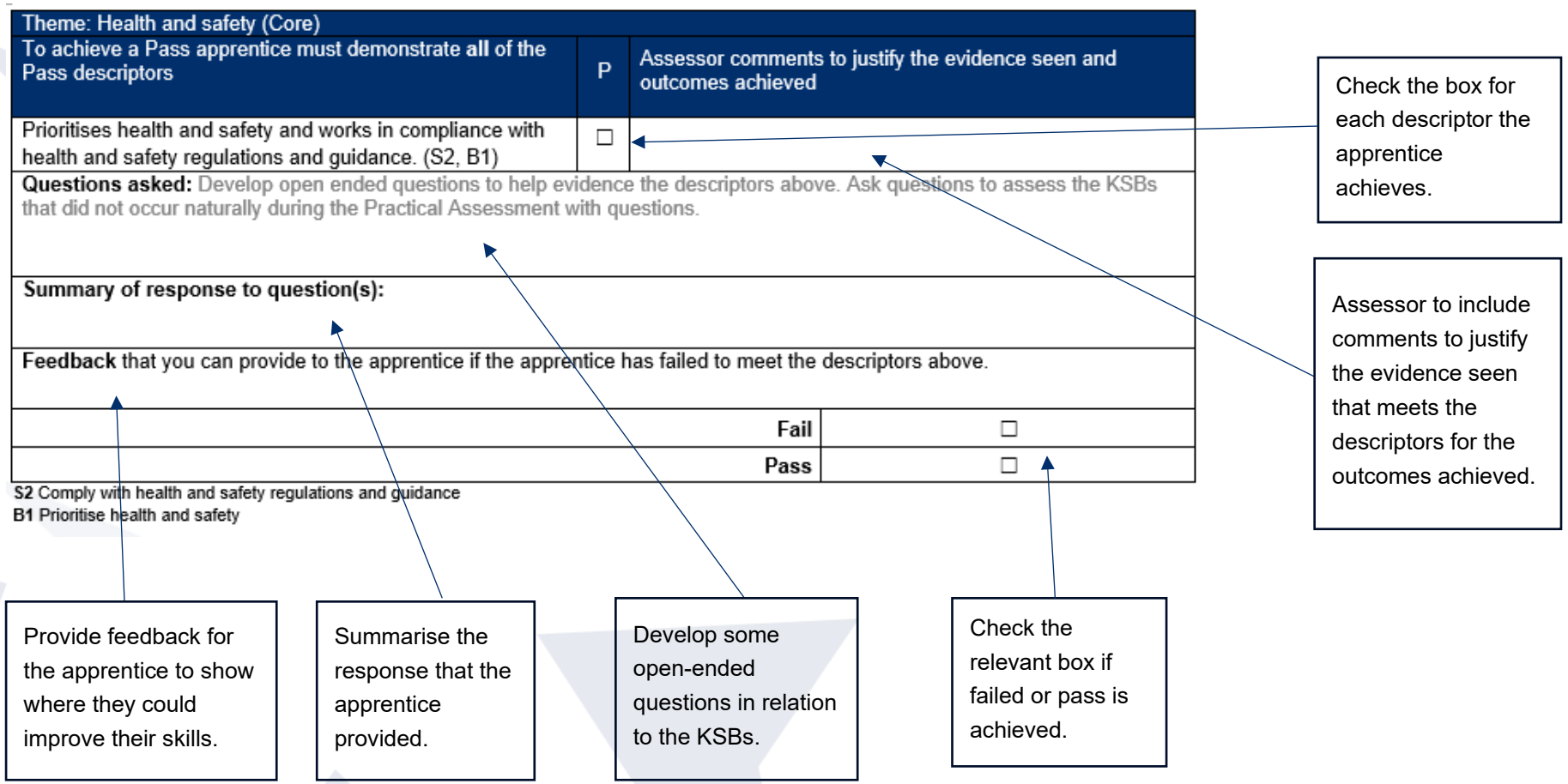
1. To prepare for a practice observation with questions
2. Designed to holistically assess a broad range of the skills, knowledge and behaviours developed over the period of the apprenticeship by the apprentice
3. To provide feedback to the apprentice in preparation for the live assessment

The assessor should:

- complete the form below which has two parts to assess the apprentice's observation with questions.

Quick Tip – How to complete the form below:




Theme: Health and safety (Core)
To achieve a Pass apprentice must demonstrate all of the Pass descriptors
P
Assessor comments to justify the evidence seen and outcomes achieved
Prioritises health and safety and works in compliance with health and safety regulations and guidance. (S2, B1)
Questions asked: Develop open ended questions to help evidence the descriptors above. Ask questions to assess the KSBs that did not occur naturally during the Practical Assessment with questions.
Summary of response to question(s):
Feedback that you can provide to the apprentice if the apprentice has failed to meet the descriptors above.
Fail
Pass
S2 Comply with health and safety regulations and guidance
B1 Prioritise health and safety
Check the box for each descriptor the apprentice achieves.
Assessor to include comments to justify the evidence seen that meets the descriptors for the outcomes achieved.
Provide feedback for the apprentice to show where they could improve their skills.
Summarise the response that the apprentice provided.
Develop some open-ended questions in relation to the KSBs.
Check the relevant box if failed or pass is achieved.

Level 3 Water Industry Asset Maintenance Technician

Practice Observation with Questions Template - Mechanical

Name of Apprentice	
Location(s) of practice observation with questions	
Name of person playing the role of an Independent Assessor	
Date	
Start Time	
End Time	
Practice: Person Playing the Role of an Independent Assessor - Additional comments:	

Please indicate the apprentice's practice observation with questions grade	Pass	Fail
	☐	☐

By signing below, I confirm that the information provided is correct and the practice grade awarded is a true reflection of the performance by the apprentice.

The person playing the role of the Independent Assessor Full Name and Signature:	**Date:**

Please Note:

Fail: the apprentice does not demonstrate the Pass descriptors.

To achieve a Pass, the Apprentice must achieve **all** the Pass descriptors.

Assessor questions: during the live assessment, the assessor **must** ask at least 5 open questions.

Introduction

At the start of the observation with questions the assessor will:

- Introduce themselves
- Confirm their role
- State the date of the observation with questions
- Provide apprentice with information on the format of the observation with questions, including the timescales they will be working to

The apprentice will:

- Give their full name and date of birth
- Give their employer's name
- Confirm they are prepared for the observation with questions; and confirm they can continue with the assessment

The apprentice will be asked to show their identification to the assessor prior to beginning the assessment.

Important points to inform the apprentice

- If at any point during the observation you perform an unsafe act/task which contravenes Health and Safety, I will immediately stop the assessment.
- Please do not judge anything by me taking notes and you should not infer anything positive or negative from how long the observation lasts.
- Ensure that your mobile is turned off or placed somewhere where you will not be interrupted during the observation

Assessor Guidance

Delivery

The observation with questions:

- must take 4 hours. The assessor may increase the time by up to 10% to allow the apprentice to complete a task or respond to a question if necessary

You must:

- observe the apprentice carrying out their normal working duties:
- observe apprentices 1:1 ratio
- be as unobtrusive as possible
- explain to the apprentice the format and timescales of the practical before they start
- ask at least 5 questions. Questioning can occur both during and after the practical assessment
- use open-ended questions to suit individual circumstances. Follow-up questions may be asked to clarify answers given by the apprentice
- write down the question to be asked and responses to all questions

At the end of the observation with questions - Thank the apprentice for their time.

Theme: Prepare for work (Core)		
To achieve a Pass apprentice must demonstrate **all** of the Pass descriptors	P	Assessor comments to justify the evidence seen and outcomes achieved
Identifies and organises resources required to complete tasks with consideration for process, cost, quality, safety, security and environmental impact. (S3)	☐	
Questions asked: Develop open ended questions to help evidence the descriptors above. Ask questions to assess the KSBs that did not occur naturally during the Observation with questions.		
Summary of response to question(s):		
Feedback that you can provide to the apprentice if the apprentice has failed to meet the descriptors above.		
	Fail	☐
	Pass	☐

S3: Identify and organise resources to complete tasks, with consideration for process, cost, quality, safety, security and environmental impact.

Theme: Health and safety (Core)		
To achieve a Pass apprentice must demonstrate **all** of the Pass descriptors	P	Assessor comments to justify the evidence seen and outcomes achieved
Takes responsibility for themselves, others, sites and assets and promotes health, safety and wellbeing in the workplace by following safe systems of work and using PPE, in compliance with health and safety regulations, standards and guidance. (K7, S4, B1)	☐	
Restores the work area on completion of the activity in line with company or task requirements. (S7)	☐	
Questions asked: Develop open ended questions to help evidence the descriptors above. Ask questions to assess the KSBs that did not occur naturally during the Observation with questions.		
Summary of response to question(s):		
Feedback that you can provide to the apprentice if the apprentice has failed to meet the descriptors above.		
Fail	☐	
Pass	☐	

K7: Safe systems of work.
S4: Follow health and safety procedures and safe systems of work in compliance with regulations and standards, including PPE.
S7: Restore the work area on completion of the activity.
B1: Take responsibility for and promotes health, safety and wellbeing for self, others, site and assets.

Theme: Documentation and written communication (Core)		
To achieve a Pass apprentice must demonstrate **all** of the Pass descriptors	P	Assessor comments to justify the evidence seen and outcomes achieved
Communicates in writing in the workplace and records or enters information for work tasks, using paper-based or electronic methods in line with company procedures and task requirements. (K15, S8)	☐	
Questions asked: Develop open ended questions to help evidence the descriptors above. Ask questions to assess the KSBs that did not occur naturally during the Observation with questions.		
Summary of response to question(s):		
Feedback that you can provide to the apprentice if the apprentice has failed to meet the descriptors above.		
	Fail	☐
	Pass	☐

K15: Written communication and documentation: methods and requirements - electronic and paper. Service records. Test results.
S8: Communicate in writing and record or enter information - paper based or electronic. For example, job sheets, risk assessments, equipment service records, test results, handover documents and manufacturers' documentation, asset management records, work sheets, checklists, waste environmental records and legal reporting requirements.

Theme: Repair or maintenance (Mechanical)		
To achieve a Pass apprentice must demonstrate **all** of the Pass descriptors	P	Assessor comments to justify the evidence seen and outcomes achieved
Applies mechanical theories and principles to isolate, depressurise, disconnect and remove mechanical plant or equipment in preparation for installation or repair or maintenance work in accordance with work permits and employer's safe isolation policies, to complete task requirements. (K24, S18, S21, S30)	☐	
Uses tools, equipment, resources or components for installation, or maintenance or repair of mechanical systems in line with procedures and manufacturers' guidelines to complete task requirements. (K27, S20)	☐	
Applies repair or maintenance practices and techniques to repair or maintain machinery, equipment or components in line with manufacturer's guidelines and task requirements. (K26, S19)	☐	
Monitors, inspects or tests mechanical systems, equipment or components in line with manufacturer's inspection and testing requirements and task requirements. (K29, S22, S24)	☐	
Questions asked: Develop open ended questions to help evidence the descriptors above. Ask questions to assess the KSBs that did not occur naturally during the Observation with questions.		

Theme: Repair or maintenance (Mechanical)	
Summary of response to question(s):	
Feedback that you can provide to the apprentice if the apprentice has failed to meet the descriptors above.	
Fail	☐
Pass	☐

K24: Safe isolation and depressurisation of mechanical plant and equipment in preparation for repair and maintenance work. Permits, safe isolation policies and procedures, lock off systems.
K26: Repair and maintenance of machinery, equipment and components. Practices and techniques. Removing and replacing parts, set up, adjustment, cleaning and lubricating.
K27: Tools, equipment, resources and components used for the installation, repair and maintenance of mechanical systems. Application, operation, care and calibration requirements.
K29: Inspection, monitoring and testing requirements and techniques.
S18: Disconnect and remove mechanical equipment or components.
S19: Apply repair and maintenance practices and techniques.
S20: Use tools, equipment, resources and components for installation, repair and maintenance tasks.
S21: Isolate plant and equipment in preparation for maintenance work, including permits, safe isolation policies, lock off systems and depressurisation of pressurised systems.
S22: Inspect and test mechanical systems and components.
S24: Carry out inspection and monitoring of mechanical systems and equipment.
S30: Apply mechanical theories and principles.

Level 3 Water Industry Asset Maintenance Technician

Practice Observation with Questions Template - Electrical

Name of Apprentice	
Location(s) of practice observation with questions	
Name of person playing the role of an Independent Assessor	
Date	
Start Time	
End Time	
Practice: Person Playing the Role of an Independent Assessor - Additional comments:	

Please indicate the apprentice's practice observation with questions grade	Pass	Fail
	☐	☐

By signing below, I confirm that the information provided is correct and the practice grade awarded is a true reflection of the performance by the apprentice.

The person playing the role of the Independent Assessor Full Name and Signature:	**Date:**

Please Note:

Fail: the apprentice does not demonstrate the Pass descriptors.

To achieve a Pass, the Apprentice must achieve **all** the Pass descriptors.

Assessor questions: during the live assessment, the assessor **must** ask at least 5 open questions.

Introduction

At the start of the observation with questions the assessor will:

- Introduce themselves
- Confirm their role
- State the date of the observation with questions
- Provide apprentice with information on the format of the observation with questions, including the timescales they will be working to

The apprentice will:

- Give their full name and date of birth
- Give their employer's name
- Confirm they are prepared for the observation with questions; and confirm they can continue with the assessment

The apprentice will be asked to show their identification to the assessor prior to beginning the assessment.

Important points to inform the apprentice

- If at any point during the observation you perform an unsafe act/task which contravenes Health and Safety, I will immediately stop the assessment.
- Please do not judge anything by me taking notes and you should not infer anything positive or negative from how long the observation lasts.
- Ensure that your mobile is turned off or placed somewhere where you will not be interrupted during the observation

Assessor Guidance

Delivery

The observation with questions:

- must take 4 hours. The assessor may increase the time by up to 10% to allow the apprentice to complete a task or respond to a question if necessary

You must:

- observe the apprentice carrying out their normal working duties:
- observe apprentices 1:1 ratio
- be as unobtrusive as possible
- explain to the apprentice the format and timescales of the practical before they start
- ask at least 5 questions. Questioning can occur both during and after the practical assessment
- use open-ended questions to suit individual circumstances. Follow-up questions may be asked to clarify answers given by the apprentice
- write down the question to be asked and responses to all questions

At the end of the observation with questions - Thank the apprentice for their time.

Theme: Prepare for work (Core)		
To achieve a Pass apprentice must demonstrate **all** of the Pass descriptors	P	Assessor comments to justify the evidence seen and outcomes achieved
Identifies and organises resources required to complete tasks with consideration for process, cost, quality, safety, security and environmental impact. (S3)	☐	
Questions asked: Develop open ended questions to help evidence the descriptors above. Ask questions to assess the KSBs that did not occur naturally during the Observation with questions.		
Summary of response to question(s):		
Feedback that you can provide to the apprentice if the apprentice has failed to meet the descriptors above.		
	Fail	☐
	Pass	☐

S3: Identify and organise resources to complete tasks, with consideration for process, cost, quality, safety, security and environmental impact.

Theme: Health and safety (Core)		
To achieve a Pass apprentice must demonstrate **all** of the Pass descriptors	P	Assessor comments to justify the evidence seen and outcomes achieved
Takes responsibility for themselves, others, sites and assets and promotes health, safety and wellbeing in the workplace by following safe systems of work and using PPE, in compliance with health and safety regulations, standards and guidance. (K7, S4, B1)	☐	
Restores the work area on completion of the activity in line with company or task requirements. (S7)	☐	
Questions asked: Develop open ended questions to help evidence the descriptors above. Ask questions to assess the KSBs that did not occur naturally during the Observation with questions.		
Summary of response to question(s):		
Feedback that you can provide to the apprentice if the apprentice has failed to meet the descriptors above.		
Fail	☐	
Pass	☐	

K7: Safe systems of work.
S4: Follow health and safety procedures and safe systems of work in compliance with regulations and standards, including PPE.
S7: Restore the work area on completion of the activity.
B1: Take responsibility for and promotes health, safety and wellbeing for self, others, site and assets.

Theme: Documentation and written communication (Core)		
To achieve a Pass apprentice must demonstrate **all** of the Pass descriptors	P	Assessor comments to justify the evidence seen and outcomes achieved
Communicates in writing in the workplace and records or enters information for work tasks, using paper-based or electronic methods in line with company procedures and task requirements. (K15, S8)	☐	
Questions asked: Develop open ended questions to help evidence the descriptors above. Ask questions to assess the KSBs that did not occur naturally during the Observation with questions.		
Summary of response to question(s):		
Feedback that you can provide to the apprentice if the apprentice has failed to meet the descriptors above.		
Fail	☐	
Pass	☐	

K15: Written communication and documentation: methods and requirements - electronic and paper. Service records. Test results.
S8: Communicate in writing and record or enter information - paper based or electronic. For example, job sheets, risk assessments, equipment service records, test results, handover documents and manufacturers' documentation, asset management records, work sheets, checklists, waste environmental records and legal reporting requirements.

Theme: Repair or maintenance (Electrical)		
To achieve a Pass apprentice must demonstrate **all** of the Pass descriptors	P	Assessor comments to justify the evidence seen and outcomes achieved
Applies electrical theories and principles to isolate plant or electrical equipment in preparation for installation or repair or maintenance work in accordance with work permits and employer's safe isolation policies and lock off systems to complete task requirements. (K38, S33, S39)	☐	
Uses tools, equipment, resources or components for installation or maintenance or repair of electrical systems in line with procedures and manufacturers' guidelines to complete task requirements. (K42, S38)	☐	
Applies repair or maintenance practices and techniques to repair or maintain equipment or components in line with manufacturer's guidelines and task requirements. (K45, S34)	☐	
Inspects or tests electrical installations and equipment in accordance with manufacturer's inspection and testing requirements and task requirements. (K44, S40)	☐	
Questions asked: Develop open ended questions to help evidence the descriptors above. Ask questions to assess the KSBs that did not occur naturally during the Observation with questions.		
Summary of response to question(s):		

Theme: Repair or maintenance (Electrical)	
Feedback that you can provide to the apprentice if the apprentice has failed to meet the descriptors above.	
Fail	☐
Pass	☐

K38: Safe isolation of plant and electrical equipment in preparation for repair and maintenance work. Permits, safe isolation policies and procedures, lock off systems.
K42: Tools, equipment, resources and components used for the installation, repair and maintenance of electrical systems. Application, operation, care and calibration requirements.
K44: Inspection and testing requirements and techniques.
K45: Repair and maintenance of equipment and components. Practices and techniques. Removing and replacing parts.
S33: Apply electrical theories and principles.
S34: Apply repair and maintenance practices and techniques.
S38: Use tools, equipment, resources and components for installation, repair and maintenance.
S39: Isolate equipment in preparation for maintenance work, including permits, safe isolation policies and lock off systems.
S40: Inspect and test electrical installations and equipment.

Level 3 Water Industry Asset Maintenance Technician

Practice Observation with Questions Template – Instrumentation, control and automation

Name of Apprentice	
Location(s) of practice observation with questions	
Name of person playing the role of an Independent Assessor	
Date	
Start Time	
End Time	
Practice: Person Playing the Role of an Independent Assessor - Additional comments:	

Please indicate the apprentice's practice observation with questions grade	Pass	Fail
	☐	☐

By signing below, I confirm that the information provided is correct and the practice grade awarded is a true reflection of the performance by the apprentice.

The person playing the role of the Independent Assessor Full Name and Signature:	**Date:**

Please Note:

Fail: the apprentice does not demonstrate the Pass descriptors.

To achieve a Pass, the Apprentice must achieve **all** the Pass descriptors.

Assessor questions: during the live assessment, the assessor **must** ask at least 5 open questions.

Introduction

At the start of the observation with questions the assessor will:

- Introduce themselves
- Confirm their role
- State the date of the observation with questions
- Provide apprentice with information on the format of the observation with questions, including the timescales they will be working to

The apprentice will:

- Give their full name and date of birth
- Give their employer's name
- Confirm they are prepared for the observation with questions; and confirm they can continue with the assessment

The apprentice will be asked to show their identification to the assessor prior to beginning the assessment.

Important points to inform the apprentice

- If at any point during the observation you perform an unsafe act/task which contravenes Health and Safety, I will immediately stop the assessment.
- Please do not judge anything by me taking notes and you should not infer anything positive or negative from how long the observation lasts.
- Ensure that your mobile is turned off or placed somewhere where you will not be interrupted during the observation

Assessor Guidance

Delivery

The observation with questions:

- must take 4 hours. The assessor may increase the time by up to 10% to allow the apprentice to complete a task or respond to a question if necessary

You must:

- observe the apprentice carrying out their normal working duties:
- observe apprentices 1:1 ratio
- be as unobtrusive as possible
- explain to the apprentice the format and timescales of the practical before they start
- ask at least 5 questions. Questioning can occur both during and after the practical assessment
- use open-ended questions to suit individual circumstances. Follow-up questions may be asked to clarify answers given by the apprentice
- write down the question to be asked and responses to all questions

At the end of the observation with questions - Thank the apprentice for their time.

Theme: Prepare for work (Core)		
To achieve a Pass apprentice must demonstrate **all** of the Pass descriptors	P	Assessor comments to justify the evidence seen and outcomes achieved
Identifies and organises resources required to complete tasks with consideration for process, cost, quality, safety, security and environmental impact. (S3)	☐	
Questions asked: Develop open ended questions to help evidence the descriptors above. Ask questions to assess the KSBs that did not occur naturally during the Observation with questions.		
Summary of response to question(s):		
Feedback that you can provide to the apprentice if the apprentice has failed to meet the descriptors above.		
	Fail	☐
	Pass	☐

S3: Identify and organise resources to complete tasks, with consideration for process, cost, quality, safety, security and environmental impact.

Theme: Health and safety (Core)		
To achieve a Pass apprentice must demonstrate **all** of the Pass descriptors	P	Assessor comments to justify the evidence seen and outcomes achieved
Takes responsibility for themselves, others, sites and assets and promotes health, safety and wellbeing in the workplace by following safe systems of work and using PPE, in compliance with health and safety regulations, standards and guidance. (K7, S4, B1)	☐	
Restores the work area on completion of the activity in line with company or task requirements. (S7)	☐	
Questions asked: Develop open ended questions to help evidence the descriptors above. Ask questions to assess the KSBs that did not occur naturally during the Observation with questions.		
Summary of response to question(s):		
Feedback that you can provide to the apprentice if the apprentice has failed to meet the descriptors above.		
Fail	☐	
Pass	☐	

K7: Safe systems of work.
S4: Follow health and safety procedures and safe systems of work in compliance with regulations and standards, including PPE.
S7: Restore the work area on completion of the activity.
B1: Take responsibility for and promotes health, safety and wellbeing for self, others, site and assets.

Theme: Documentation and written communication (Core)		
To achieve a Pass apprentice must demonstrate **all** of the Pass descriptors	P	Assessor comments to justify the evidence seen and outcomes achieved
Communicates in writing in the workplace and records or enters information for work tasks, using paper-based or electronic methods in line with company procedures and task requirements. (K15, S8)	☐	
Questions asked: Develop open ended questions to help evidence the descriptors above. Ask questions to assess the KSBs that did not occur naturally during the Observation with questions.		
Summary of response to question(s):		
Feedback that you can provide to the apprentice if the apprentice has failed to meet the descriptors above.		
Fail	☐	
Pass	☐	

K15: Written communication and documentation: methods and requirements - electronic and paper. Service records. Test results.
S8: Communicate in writing and record or enter information - paper based or electronic. For example, job sheets, risk assessments, equipment service records, test results, handover documents and manufacturers' documentation, asset management records, work sheets, checklists, waste environmental records and legal reporting requirements.

Theme: Configure and calibrate (Instrumentation, control and automation)		
To achieve a Pass apprentice must demonstrate **all** of the Pass descriptors	P	Assessor comments to justify the evidence seen and outcomes achieved
Calibrates and monitors open or closed loop systems in first or second order control systems, in line with task requirements. (K54, S48)	☐	
Configures and calibrates ICA equipment, instrumentation and control devices to required precision and tolerance in line with employer's procedures and task requirements. (K62, S47, S55)	☐	
Questions asked: Develop open ended questions to help evidence the descriptors above. Ask questions to assess the KSBs that did not occur naturally during the Observation with questions.		
Summary of response to question(s):		
Feedback that you can provide to the apprentice if the apprentice has failed to meet the descriptors above.		
Fail	☐	
Pass	☐	

K54: Open and closed loop systems. First and second order control systems.
K62: Configuration and calibration procedures and requirements. Precision and tolerance.
S47: Configure instrumentation and control devices.
S48: Calibrate and monitor open and closed loop systems.
S55: Calibrate ICA equipment.

Theme: Repair and maintenance (Instrumentation, control and automation)		
To achieve a Pass apprentice must demonstrate **all** of the Pass descriptors	P	Assessor comments to justify the evidence seen and outcomes achieved
Applies electrical theories and principles to isolate plant or ICA equipment in preparation for installation or repair or maintenance work, in accordance with work permits and employer's safe isolation policies and lock off systems and task requirements. (K55, S45, S57)	☐	
Uses tools, equipment, resources or components for installation, or maintenance or repair of ICA systems in line with procedures, manufacturer's guidelines and task requirements. (K56, S49)	☐	
Applies repair or maintenance practices and techniques to instrumentation, control equipment, control systems, controllers, probes, attachments, cabling, meters and display units in line with manufacturer's guidelines and task requirements. (K52, S51)	☐	
Inspects or tests ICA equipment to assess condition and identifies action required in line with manufacturer's inspection and testing requirements and task requirements. (K59, S53, S61)	☐	
Questions asked: Develop open ended questions to help evidence the descriptors above. Ask questions to assess the KSBs that did not occur naturally during the Observation with questions.		

Theme: Repair and maintenance (Instrumentation, control and automation)	
Summary of response to question(s):	
Feedback that you can provide to the apprentice if the apprentice has failed to meet the descriptors above.	
Fail	☐
Pass	☐

K52: Repair and maintenance of instruments, controllers, sensors, probes, attachments, cabling, meters and display units. Practices and techniques.
K55: Safe isolation of plant and ICA equipment in preparation for repair and maintenance work. Permits, safe isolation policies, lock off systems.
K56: Tools, equipment, resources and components used for the installation, repair and maintenance of control systems. Application, operation, care and calibration requirements.
K59: Inspection and testing requirements and techniques.
S45: Apply electrical theories and principles.
S49: Use tools, equipment, resources and components for installation, repair and maintenance.
S51: Apply repair and maintenance practices and techniques to instrumentation and control equipment, control systems and cabling.
S53: Inspect and test ICA equipment.
S57: Isolate equipment in preparation for maintenance work, including permits, safe isolation policies and lock off systems.
S61: Assess condition of equipment. Identify action required.

Appendix F: Practice Interview Based on an EPA Portfolio Template

Employers/training providers are recommended to arrange for apprentices to carry out a practice interview based on an EPA portfolio prior to end-point assessment.

Instructions

This should be read in conjunction with the WIAMT Specification.

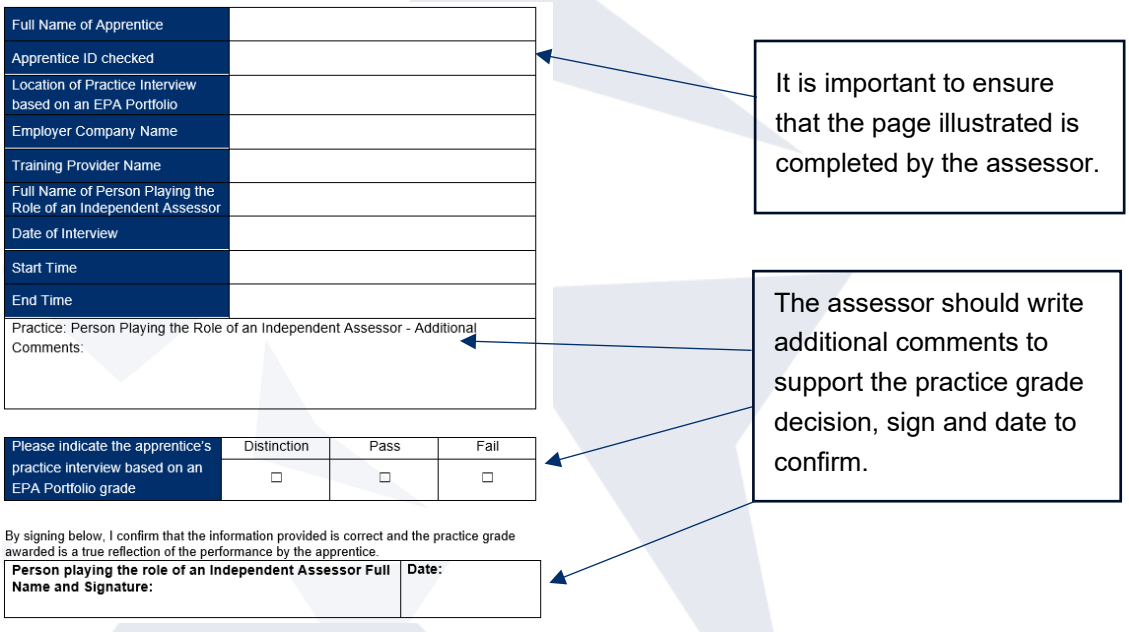
This template has been designed to help the suitable person playing part of the independent assessor and has three purposes:

1. To prepare for a practice interview
2. Designed to holistically assess a broad range of the skills, knowledge and behaviours developed over the period of the apprenticeship by the apprentice
3. To provide feedback to the apprentice in preparation for the live assessment

The assessor should:

- complete the form below which has two parts to assess the apprentice's Interview.
- review the apprentice's portfolio of evidence before the practice interview

Quick Tip – How to complete the form below:



Full Name of Apprentice	
Apprentice ID checked	
Location of Practice Interview based on an EPA Portfolio	
Employer Company Name	
Training Provider Name	
Full Name of Person Playing the Role of an Independent Assessor	
Date of Interview	
Start Time	
End Time	

Practice: Person Playing the Role of an Independent Assessor - Additional Comments:

Please indicate the apprentice's practice interview based on an EPA Portfolio grade	Distinction	Pass	Fail
	☐	☐	☐

By signing below, I confirm that the information provided is correct and the practice grade awarded is a true reflection of the performance by the apprentice.

Person playing the role of an Independent Assessor Full Name and Signature:	Date:

Theme: Planning for work (Core)		
To achieve a Pass apprentice must demonstrate all of the Pass descriptors	P	Assessor comments to justify the evidence seen and outcomes achieved
Pass: Describes how they plan, prioritise and schedule maintenance, installation or repair work, taking into account process safety, risk assessments and the impact on the environment and water treatment or wastewater recycling. (K11, S2)	☐	
Pass: Describes the planned, preventative, predictive and reactive maintenance strategies and techniques used in their workplace and outlines the frequency of each method in accordance with company procedures. (K14)	☐	
Pass: Explains how they select, check, store and maintain tools and equipment in line with manufacturers' guidelines and operating instructions, including calibration checks. (K13, S6)	☐	
Questions asked: Develop open ended questions to help evidence the descriptors above.		
Write down the follow up questions asked:		
Summary of response to question(s):		
Feedback that you can provide to the apprentice if the apprentice has failed to meet the descriptors above.		
Portfolio reference		**Time of question(s)**
		Fail ☐
		Pass ☐

Check the box for each descriptor the apprentice achieves.

Person playing the Independent Assessor to provide comments to justify the evidence seen.

Check the fail, pass or distinction, (where applicable), box to confirm the grade for this group.

Include the page number(s) of where in the portfolio of evidence has been seen that meets the descriptor above.

Develop some open ended questions in relation to the KSBs.

If follow up questions are asked include them here.

Record the time the question is asked.

Water Industry Asset Maintenance Technician

Practice Interview based on an EPA Portfolio Template - Mechanical

Full Name of Apprentice	
Apprentice ID checked	
Location of Practice Interview based on an EPA Portfolio	
Employer Company Name	
Training Provider Name	
Full Name of Person Playing the Role of an Independent Assessor	
Date of Interview	
Start Time	
End Time	
Practice: Person Playing the Role of an Independent Assessor - Additional Comments:	

Please indicate the apprentice's practice interview based on an EPA Portfolio grade	Distinction	Pass	Fail
	☐	☐	☐

By signing below, I confirm that the information provided is correct and the practice grade awarded is a true reflection of the performance by the apprentice.

Person playing the role of an Independent Assessor Full Name and Signature:	**Date:**

Please Note:
To achieve a Pass, the Apprentice must achieve **all** of the Pass descriptors.
To achieve a Distinction the Apprentice must achieve **all** of the Pass and Distinction descriptors.
Fail: The apprentice does not demonstrate the Pass descriptors.

Introduction
At the start of the interview based on an EPA portfolio the assessor will: • Introduce themselves • State their role • State the date of the interview • Request and confirm ID from the apprentice prior to beginning the assessment • Provide apprentice with information on the format of the with questions, including the timescales they will be working to The apprentice will: • Confirm their full name and date of birth • Give their employer's name • Confirm their location and that no one else is present in the room, if remote apprentice to pan camera 360º • Confirm they are prepared for the interview; and confirm they can continue with the interview • Confirm that the evidence within the portfolio relates to the KSB's that will be assessed during the interview
Important points to inform the apprentice
• Please do not judge anything by the notes being taken, nor infer anything positive or negative from how long the interview lasts • Please do not consider me rude if I tell you that we need to move onto the next question. This will ensure that you get the opportunity to fully demonstrate your competencies within the time allowed • Please ensure that your mobile is switched off or placed somewhere where you will not be interrupted during the interview • Confirm that a sign is placed on the door of the assessment room. 'Assessment in progress - Do not disturb' Note: The live interview will be fully recorded for the purpose of audit and quality assurance

Independent Assessor Guidance
Delivery • The interview must last 90 minutes. An additional 10% is allowed for the apprentice to complete their last answer • The person playing the role of the independent assessor must ask a minimum of ten questions • Questions should be adapted to the apprentice's circumstances following a review of their EPA portfolio evidence • Additional follow-up questions are allowed to seek clarification and to make a judgement against grading descriptor • Please work through the sections in the order they appear within this document • Answers to questions must be recorded. Timeline each question to the recording. Only log the time for the start of each question asked • All questions and responses must be recorded on this document • Supply brief written notes where each descriptor has been met • If the apprentice does not achieve a descriptor, provide written notes that you can feed back to the apprentice to help the apprentice prepare for the live assessment At the end of the professional interview - Thank the apprentice for their time

Theme: Responsibilities and continual improvement (Core)		
To achieve a Pass apprentice must demonstrate **all** of the Pass descriptors To achieve a Distinction apprentice must demonstrate **all** of the Pass descriptors and **all** of the Distinction descriptors	P/D	Assessor comments to justify the evidence seen and outcomes achieved
Role, responsibilities and requirements (Core)		
Pass: Describes the responsibilities, reporting channels and limits of autonomy applicable to their role and how they work in line with industry legislative requirements, standards and regulatory requirements, including those related to materials in contact and food-grade lubricants and OfWAT's Asset Management Periods. (K2, K5, S1)	☐	
Distinction: Explains the benefits and importance for individuals and the business of complying with water industry standards, legislative and regulatory requirements and the consequences of non-compliance. (K2, K5, S1)	☐	
Continual improvement and CPD (Core)		
Pass: Describes how they have sought to improve ways of working by applying a continuous improvement technique to devise a suggestion for asset or process optimisation or improvement. (K18, S12, B3)	☐	
Distinction: Justifies the potential impact of their improvement suggestions with consideration to benefits and potential risks. (K18, S12, B3)	☐	
Pass: Outlines the learning and development activities they have carried out and shows a commitment to future continued	☐	

professional development of self and others to maintain and enhance competence. (S14, B7)			
Questions asked: Develop open ended questions to help evidence the descriptors above.			
Write down the follow up questions asked:			
Summary of response to question(s):			
Feedback that you can provide to the apprentice if the apprentice has failed to meet the descriptors above.			
Portfolio reference		**Time of question(s)**	
		Fail	☐
		Pass	☐
		Distinction	☐

K2: Awareness of water industry legislative and regulatory requirements. Materials in contact (WRAS approved), food grade lubricants. Asset Management Periods.
K5: Water industry maintenance technician role, responsibilities, limits of autonomy and reporting channels.
K18: Continuous improvement techniques. Asset and process optimisation.
S1: Work in line with water industry standards and regulatory requirements.
S12: Apply continuous improvement techniques. Devise suggestions for improvement.
S14: Carry out and record learning and development activities.
B3: Seek to improve ways of working.
B7: Committed to maintaining and enhancing competence of self and others through Continued Professional Development (CPD).

Theme: Health, safety, security, environment and sustainability (Core)		
To achieve a Pass apprentice must demonstrate **all** of the Pass descriptors To achieve a Distinction apprentice must demonstrate **all** of the Pass descriptors and **all** of the Distinction descriptors	P/D	Assessor comments to justify the evidence seen and outcomes achieved
Pass: Outlines the personal hygiene risks and requirements for working on a water treatment or wastewater treatment site. (K16)	☐	
Pass: Describes how they comply with sustainability principles and consider the environmental impact of water industry operations in their role, in line with organisational procedures, regulations and standards for material reuse and recycling. (K10, S5, B2)	☐	
Pass: States the ATEX and DSEAR regulations which they must follow when working in and around explosive atmospheres. (K8)	☐	
Pass: Explains how they identify issues and take responsibility for their own actions when following organisational asset security requirements for site access, documentation and securing assets. (K12, S15, B6)	☐	
Pass: Describes how they comply with their employer's process safety, process risk assessments and incident management procedures. (K17)	☐	
Distinction: Explains the benefits to themselves and the business of complying with the company's process safety, process risk assessments and incident management procedures. (K17)	☐	

Questions asked: Develop open ended questions to help evidence the descriptors above.			
Write down the follow up questions asked:			
Summary of response to question(s):			
Feedback that you can provide to the apprentice if the apprentice has failed to meet the descriptors above.			
Portfolio reference		**Time of question(s)**	
		Fail	☐
		Pass	☐
		Distinction	☐

K8: Dangerous Substances and Explosive Atmospheres Regulations (DSEAR). ATEX compliance (safety requirements of the workplace and equipment used in explosive atmospheres). Working in and around explosive atmospheres. Hazardous areas (DSEAR zones). PPE. Intrinsically safe tools for working in explosive atmospheres. Exposure limits. Necessary forced pre-ventilation. Gas monitoring equipment.
K10: The impact water industry operations have on the environment.
K12: Asset security requirements.
K16: Personal hygiene risks and requirements for working on a water treatment or a wastewater treatment site.
K17: Water industry process safety and process risk assessments. Incidents and emergency situations (internal and external): pollution, loss of process, security, weather, and accidents: their potential impact. Incident management and procedures. The risk of pollution and untreated water in supply.
S5: Comply with sustainability principles. Segregate waste for recycling, reuse or disposal.
S15: Comply with security procedures. For example, site access, document classification, and securing assets.
B2: Considers the environment and sustainability.
B6: Identifies issues and takes responsibility for actions.

Theme: Working with others (Core)		
To achieve a Pass apprentice must demonstrate **all** of the Pass descriptors To achieve a Distinction apprentice must demonstrate **all** of the Pass descriptors and **all** of the Distinction descriptors	P/D	Assessor comments to justify the evidence seen and outcomes achieved
Equity and diversity (Core)		
Pass: Describes how they promote inclusivity in the workplace with colleagues, stakeholders and customers by applying the principles, policies and practices of equity, diversity and inclusion, taking account of unconscious bias. (K19, S10, B4)	☐	
Team working and communication		
Pass: Describes how they collaborate and promote teamwork across disciplines by applying team working principles in line with organisational policy. (K20, S11, B5)	☐	
Pass: Describes how they communicate with and provide support, technical advice, work updates and information in their work that are suitable for the context. (K21, S13)	☐	
ICT and digital		
Pass: Describes how they use information and digital technology to collect, interpret and use data and information, in compliance with cyber security regulations and policies and GDPR. (K22, S9)	☐	

Distinction: Outlines the benefits to themselves and the business of ensuring GDPR and cyber security regulations and policies are followed. (K22, S9)	☐	
Questions asked: Develop open ended questions to help evidence the descriptors above.		
Write down the follow up questions asked:		
Summary of response to question(s):		
Feedback that you can provide to the apprentice if the apprentice has failed to meet the descriptors above.		

Portfolio reference		**Time of question(s)**	
		Fail	☐
		Pass	☐
		Distinction	☐

K19: Principles of equity, diversity, and inclusion in the workplace. Unconscious bias.
K20: Team working principles.
K21: Non-written communication methods and techniques. Engineering maintenance terminology.
K22: Information technology and digital: digital interfaces, email, Management Information Systems (MIS), spreadsheets, presentation, word processing, virtual communication, learning platforms, work collaboration platforms. General Data Protection Regulation (GDPR). Cyber security.
S9: Collect, interpret and use data and information using information and digital technology. Comply with GDPR and cyber security regulations and policies.
S10: Apply equity, diversity and inclusion policies and practices.
S11: Apply teamworking principles.
S13: Communicate with and provide support, technical advice, work updates and information to technical and non-technical colleagues and other stakeholders.
B4: Promote inclusivity in the workplace with colleagues, stakeholders, and customers.
B5: Collaborate and promote teamwork across disciplines
.

Theme: Planning for work (Core)		
To achieve a Pass apprentice must demonstrate **all** of the Pass descriptors	P	Assessor comments to justify the evidence seen and outcomes achieved
Pass: Describes how they plan, prioritise and schedule maintenance, installation or repair work, taking into account process safety, risk assessments and the impact on the environment and water treatment or wastewater recycling. (K11, S2)	☐	
Pass: Describes the planned, preventative, predictive and reactive maintenance strategies and techniques used in their workplace and outlines the frequency of each method in accordance with company procedures. (K14)	☐	
Pass: Explains how they select, check, store and maintain tools and equipment in line with manufacturers' guidelines and operating instructions, including calibration checks. (K13, S6)	☐	
Questions asked: Develop open ended questions to help evidence the descriptors above.		
Write down the follow up questions asked:		
Summary of response to question(s):		
Feedback that you can provide to the apprentice if the apprentice has failed to meet the descriptors above.		

Portfolio reference		**Time of question(s)**	
		Fail	☐
		Pass	☐

K11: Planning, prioritising, work scheduling and time management approaches.
K13: Tools and equipment used in maintenance and repair tasks. Operational checks, calibration, storage and maintenance requirements.
K14: Maintenance strategies and techniques: planned, preventative, predictive and reactive methods and their frequency.

S2: Plan maintenance work, taking into consideration: process safety and following process risk assessments; the impact work has on the environment and on water treatment or wastewater recycling.
S6: Select, check store and maintain equipment and tools.

Theme: Work activities (Mechanical)		
To achieve a Pass apprentice must demonstrate **all** of the Pass descriptors To achieve a Distinction apprentice must demonstrate **all** of the Pass descriptors and **all** of the Distinction descriptors	P/D	Assessor comments to justify the evidence seen and outcomes achieved
Installation, commissioning and decommissioning		
Pass: Describes the practices and techniques they use to install, commission and decommission mechanical systems and equipment in line with manufacturers' requirements. (K25, S16)	☐	
Repair or maintenance		
Pass: Describes how they use machinery to carry out basic fabrication, welding and thermal cutting processes for mechanical components and structures to complete the task in accordance with task requirements and manufacturers' instructions. (K30, S27, S29)	☐	
Distinction: Explains how they achieve a right-first-time outcome for fabrication, welding and thermal cutting tasks in line with task requirements. (K30, S27)	☐	
Pass: Describes how they apply bench fitting techniques to assemble mechanical equipment or components in line with specification and task requirements. (K31, S28)	☐	
Pass: Describes how they interpret and use manufacturers' instructions, design specifications, plans and drawings to position and install mechanical equipment or components in line with specification and task requirements. (K33, S17, S26)	☐	

Fault finding and problem solving		
Pass: Describes how they use fault finding, problem-solving and rectification techniques, aids and diagnostic equipment to fault find, identify a problem, and any underlying causes before providing a solution in line with the task requirements. (K28, S23, S25)	☐	
Distinction: Justifies fault finding and problem-solving techniques they have used in the rectification of faults. (K28, S23)	☐	
Questions asked: Develop open ended questions to help evidence the descriptors above.		
Write down the follow up questions asked:		
Summary of response to question(s):		
Feedback that you can provide to the apprentice if the apprentice has failed to meet the descriptors above.		

Portfolio reference		**Time of question(s)**	
		Fail	☐
		Pass	☐

K25: Practices and techniques for the installation, commissioning and decommissioning of mechanical systems and equipment.
K28: Fault finding, problem solving and rectification techniques. Aids and diagnostic equipment.
K30: Basic fabrication, welding and thermal cutting processes for mechanical components and structures.
K31: Bench fitting techniques used in equipment and component assembly.
K33: Design specifications, plans, drawings and manufacturer's instructions.
S16: Carry out commissioning and decommissioning tasks on mechanical equipment.
S17: Assemble, position and install mechanical equipment or components.
S23: Carry out fault finding and rectification techniques using aids and diagnostic equipment.
S25: Identify a problem, investigate problem to identify the underlying cause. Identify a solution.
S26: Interpret and use manufacturer's instructions, design specifications, plans and drawings.

S27: Apply basic fabrication, welding and thermal cutting processes for mechanical components and structures.
S28: Apply bench fitting techniques.
S29: Use machinery. For example, lathes, pillar drills, milling machine, threading machine, mechanical saws.

Water Industry Asset Maintenance Technician

Practice Interview based on an EPA Portfolio Template - Electrical

Full Name of Apprentice	
Apprentice ID checked	
Location of Practice Interview based on an EPA Portfolio	
Employer Company Name	
Training Provider Name	
Full Name of Person Playing the Role of an Independent Assessor	
Date of Interview	
Start Time	
End Time	
Practice: Person Playing the Role of an Independent Assessor - Additional Comments:	

Please indicate the apprentice's practice interview based on an EPA Portfolio grade	Distinction	Pass	Fail
	☐	☐	☐

By signing below, I confirm that the information provided is correct and the practice grade awarded is a true reflection of the performance by the apprentice.

Person playing the role of an Independent Assessor Full Name and Signature:	**Date:**

Please Note:
To achieve a Pass, the Apprentice must achieve **all** of the Pass descriptors.
To achieve a Distinction the Apprentice must achieve **all** of the Pass and Distinction descriptors.
Fail: The apprentice does not demonstrate the Pass descriptors.

Introduction
At the start of the interview based on an EPA portfolio the assessor will: • Introduce themselves • State their role • State the date of the interview • Request and confirm ID from the apprentice prior to beginning the assessment • Provide apprentice with information on the format of the with questions, including the timescales they will be working to The apprentice will: • Confirm their full name and date of birth • Give their employer's name • Confirm their location and that no one else is present in the room, if remote apprentice to pan camera 360º • Confirm they are prepared for the interview; and confirm they can continue with the interview • Confirm that the evidence within the portfolio relates to the KSB's that will be assessed during the interview
Important points to inform the apprentice
• Please do not judge anything by the notes being taken, nor infer anything positive or negative from how long the interview lasts • Please do not consider me rude if I tell you that we need to move onto the next question. This will ensure that you get the opportunity to fully demonstrate your competencies within the time allowed • Please ensure that your mobile is switched off or placed somewhere where you will not be interrupted during the interview • Confirm that a sign is placed on the door of the assessment room. 'Assessment in progress - Do not disturb' Note: The live interview will be fully recorded for the purpose of audit and quality assurance

Independent Assessor Guidance
Delivery • The interview must last 90 minutes. An additional 10% is allowed for the apprentice to complete their last answer • The person playing the role of the independent assessor must ask a minimum of ten questions • Questions should be adapted to the apprentice's circumstances following a review of their EPA portfolio evidence • Additional follow-up questions are allowed to seek clarification and to make a judgement against grading descriptor • Please work through the sections in the order they appear within this document • Answers to questions must be recorded. Timeline each question to the recording. Only log the time for the start of each question asked • All questions and responses must be recorded on this document • Supply brief written notes where each descriptor has been met • If the apprentice does not achieve a descriptor, provide written notes that you can feed back to the apprentice to help the apprentice prepare for the live assessment At the end of the professional interview - Thank the apprentice for their time

Theme: Responsibilities and continual improvement (Core)		
To achieve a Pass apprentice must demonstrate **all** of the Pass descriptors To achieve a Distinction apprentice must demonstrate **all** of the Pass descriptors and **all** of the Distinction descriptors	P/D	Assessor comments to justify the evidence seen and outcomes achieved
Role, responsibilities and requirements (Core)		
Pass: Describes the responsibilities, reporting channels and limits of autonomy applicable to their role and how they work in line with industry legislative requirements, standards and regulatory requirements, including those related to materials in contact and food-grade lubricants and OfWAT's Asset Management Periods. (K2, K5, S1)	☐	
Distinction: Explains the benefits and importance for individuals and the business of complying with water industry standards, legislative and regulatory requirements and the consequences of non-compliance. (K2, K5, S1)	☐	
Continual improvement and CPD (Core)		
Pass: Describes how they have sought to improve ways of working by applying a continuous improvement technique to devise a suggestion for asset or process optimisation or improvement. (K18, S12, B3)	☐	
Distinction: Justifies the potential impact of their improvement suggestions with consideration to benefits and potential risks. (K18, S12, B3)	☐	
Pass: Outlines the learning and development activities they have carried out and shows a commitment to future continued	☐	

professional development of self and others to maintain and enhance competence. (S14, B7)		
Questions asked: Develop open ended questions to help evidence the descriptors above.		
Write down the follow up questions asked:		
Summary of response to question(s):		
Feedback that you can provide to the apprentice if the apprentice has failed to meet the descriptors above.		

Portfolio reference		**Time of question(s)**	
		Fail	☐
		Pass	☐
		Distinction	☐

K2: Awareness of water industry legislative and regulatory requirements. Materials in contact (WRAS approved), food grade lubricants. Asset Management Periods.
K5: Water industry maintenance technician role, responsibilities, limits of autonomy and reporting channels.
K18: Continuous improvement techniques. Asset and process optimisation.
S1: Work in line with water industry standards and regulatory requirements.
S12: Apply continuous improvement techniques. Devise suggestions for improvement.
S14: Carry out and record learning and development activities.
B3: Seek to improve ways of working.
B7: Committed to maintaining and enhancing competence of self and others through Continued Professional Development (CPD).

Theme: Health, safety, security, environment and sustainability (Core)		
To achieve a Pass apprentice must demonstrate **all** of the Pass descriptors To achieve a Distinction apprentice must demonstrate **all** of the Pass descriptors and **all** of the Distinction descriptors	P/D	Assessor comments to justify the evidence seen and outcomes achieved
Pass: Outlines the personal hygiene risks and requirements for working on a water treatment or wastewater treatment site. (K16)	☐	
Pass: Describes how they comply with sustainability principles and consider the environmental impact of water industry operations in their role, in line with organisational procedures, regulations and standards for material reuse and recycling. (K10, S5, B2)	☐	
Pass: States the ATEX and DSEAR regulations which they must follow when working in and around explosive atmospheres. (K8)	☐	
Pass: Explains how they identify issues and take responsibility for their own actions when following organisational asset security requirements for site access, documentation and securing assets. (K12, S15, B6)	☐	
Pass: Describes how they comply with their employer's process safety, process risk assessments and incident management procedures. (K17)	☐	
Distinction: Explains the benefits to themselves and the business of complying with the company's process safety, process risk assessments and incident management procedures. (K17)	☐	

Questions asked: Develop open ended questions to help evidence the descriptors above.			
Write down the follow up questions asked:			
Summary of response to question(s):			
Feedback that you can provide to the apprentice if the apprentice has failed to meet the descriptors above.			
Portfolio reference		**Time of question(s)**	
		Fail	☐
		Pass	☐
		Distinction	☐

K8: Dangerous Substances and Explosive Atmospheres Regulations (DSEAR). ATEX compliance (safety requirements of the workplace and equipment used in explosive atmospheres). Working in and around explosive atmospheres. Hazardous areas (DSEAR zones). PPE. Intrinsically safe tools for working in explosive atmospheres. Exposure limits. Necessary forced pre-ventilation. Gas monitoring equipment.
K10: The impact water industry operations have on the environment.
K12: Asset security requirements.
K16: Personal hygiene risks and requirements for working on a water treatment or a wastewater treatment site.
K17: Water industry process safety and process risk assessments. Incidents and emergency situations (internal and external): pollution, loss of process, security, weather, and accidents: their potential impact. Incident management and procedures. The risk of pollution and untreated water in supply.
S5: Comply with sustainability principles. Segregate waste for recycling, reuse or disposal.
S15: Comply with security procedures. For example, site access, document classification, and securing assets.
B2: Considers the environment and sustainability.
B6: Identifies issues and takes responsibility for actions.

Theme: Working with others (Core)		
To achieve a Pass apprentice must demonstrate **all** of the Pass descriptors To achieve a Distinction apprentice must demonstrate **all** of the Pass descriptors and **all** of the Distinction descriptors	P/D	Assessor comments to justify the evidence seen and outcomes achieved
Equity and diversity (Core)		
Pass: Describes how they promote inclusivity in the workplace with colleagues, stakeholders and customers by applying the principles, policies and practices of equity, diversity and inclusion, taking account of unconscious bias. (K19, S10, B4)	☐	
Team working and communication		
Pass: Describes how they collaborate and promote teamwork across disciplines by applying team working principles in line with organisational policy. (K20, S11, B5)	☐	
Pass: Describes how they communicate with and provide support, technical advice, work updates and information in their work that are suitable for the context. (K21, S13)	☐	
ICT and digital		
Pass: Describes how they use information and digital technology to collect, interpret and use data and information, in compliance with cyber security regulations and policies and GDPR. (K22, S9)	☐	

Distinction: Outlines the benefits to themselves and the business of ensuring GDPR and cyber security regulations and policies are followed. (K22, S9)	☐	
Questions asked: Develop open ended questions to help evidence the descriptors above.		
Write down the follow up questions asked:		
Summary of response to question(s):		
Feedback that you can provide to the apprentice if the apprentice has failed to meet the descriptors above.		

Portfolio reference		**Time of question(s)**	
		Fail	☐
		Pass	☐
		Distinction	☐

K19: Principles of equity, diversity, and inclusion in the workplace. Unconscious bias.
K20: Team working principles.
K21: Non-written communication methods and techniques. Engineering maintenance terminology.
K22: Information technology and digital: digital interfaces, email, Management Information Systems (MIS), spreadsheets, presentation, word processing, virtual communication, learning platforms, work collaboration platforms. General Data Protection Regulation (GDPR). Cyber security.
S9: Collect, interpret and use data and information using information and digital technology. Comply with GDPR and cyber security regulations and policies.
S10: Apply equity, diversity and inclusion policies and practices.
S11: Apply teamworking principles.
S13: Communicate with and provide support, technical advice, work updates and information to technical and non-technical colleagues and other stakeholders.
B4: Promote inclusivity in the workplace with colleagues, stakeholders, and customers.
B5: Collaborate and promote teamwork across disciplines
.

Theme: Planning for work (Core)		
To achieve a Pass apprentice must demonstrate **all** of the Pass descriptors	P	Assessor comments to justify the evidence seen and outcomes achieved
Pass: Describes how they plan, prioritise and schedule maintenance, installation or repair work, taking into account process safety, risk assessments and the impact on the environment and water treatment or wastewater recycling. (K11, S2)	☐	
Pass: Describes the planned, preventative, predictive and reactive maintenance strategies and techniques used in their workplace and outlines the frequency of each method in accordance with company procedures. (K14)	☐	
Pass: Explains how they select, check, store and maintain tools and equipment in line with manufacturers' guidelines and operating instructions, including calibration checks. (K13, S6)	☐	
Questions asked: Develop open ended questions to help evidence the descriptors above.		
Write down the follow up questions asked:		
Summary of response to question(s):		
Feedback that you can provide to the apprentice if the apprentice has failed to meet the descriptors above.		

Portfolio reference		**Time of question(s)**	
		Fail	☐
		Pass	☐

K11: Planning, prioritising, work scheduling and time management approaches.
K13: Tools and equipment used in maintenance and repair tasks. Operational checks, calibration, storage and maintenance requirements.
K14: Maintenance strategies and techniques: planned, preventative, predictive and reactive methods and their frequency.

S2: Plan maintenance work, taking into consideration: process safety and following process risk assessments; the impact work has on the environment and on water treatment or wastewater recycling.
S6: Select, check store and maintain equipment and tools.

Theme: Work activities (Electrical)		
To achieve a Pass apprentice must demonstrate **all** of the Pass descriptors To achieve a Distinction apprentice must demonstrate **all** of the Pass descriptors and **all** of the Distinction descriptors	P/D	Assessor comments to justify the evidence seen and outcomes achieved
Installation, commissioning and decommissioning		
Pass: Describes the practices and techniques they use to install, commission and decommission cabling and electrical equipment in line with manufacturer's requirements and wiring regulations. (K35, K46, S32)	☐	
Pass: Describes how they use electrical drawings, design specifications, plans and manufacturers' instructions to modify electrical circuits, installing different cable types and terminating in accordance with the specification and task requirements. (K37, K43, K48, S35, S41, S42)	☐	
Distinction: Justifies the modifications made to electrical circuits to achieve the task requirements. (K37, S35)	☐	
Pass: Describes how they interrogate information displayed on different types of intelligent control equipment, including PLCs HMIs, intelligent starters and variable speed drives to monitor system performance in accordance with employer's procedures and task requirements. (K39, S36)	☐	
Pass: Explains how to interpret basic telemetry signals received from outstations. (K40)	☐	

Fault finding and problem solving		
Pass: Describes how they use fault finding, problem-solving and rectification techniques, aids and diagnostic equipment to fault find, identify a problem, and any underlying causes before providing a solution in line with the task requirements. (K41, S37, S44)	☐	
Distinction: Justifies fault finding and problem-solving techniques they have used in the rectification of faults. (K41, S37)	☐	
Questions asked: Develop open ended questions to help evidence the descriptors above.		
Write down the follow up questions asked:		
Summary of response to question(s):		
Feedback that you can provide to the apprentice if the apprentice has failed to meet the descriptors above.		

Portfolio reference		**Time of question(s)**	
		Fail	☐
		Pass	☐

K35: Practices and techniques for the installation, commissioning and decommissioning of cabling and electrical equipment.
K37: Design and modification of electrical circuits.
K39: Types of intelligent control equipment. PLCs, HMIs, Intelligent starters, Variable Speed Drives (VSDs).
K40: Basic telemetry signals and outstations.
K41: Fault finding, problem solving and rectification techniques, aids and diagnostic equipment.
K43: Design specifications, plans, drawings and manufacturer's instructions.
K46: Awareness of wiring regulations - purpose and importance.
K48: Cable types and termination methods. Specifications and application.
S32: Install, commission and decommission cabling and electrical equipment.

S35: Modify electrical circuits.
S36: Interrogate information displayed on different types of intelligent control equipment. To include, PLCs, HMIs, Intelligent Starters, Variable Speed Drives (VSDs).
S37: Carry out fault finding and rectification techniques using aids and diagnostic equipment.
S41: Use electrical drawings.
S42: Install different cable types and terminate to their specifications and applications.
S44: Identify a problem, investigate problem to identify the underlying cause. Identify a solution.

Water Industry Asset Maintenance Technician

Practice Interview based on an EPA Portfolio Template – Instrumentation, control and automation

Full Name of Apprentice	
Apprentice ID checked	
Location of Practice Interview based on an EPA Portfolio	
Employer Company Name	
Training Provider Name	
Full Name of Person Playing the Role of an Independent Assessor	
Date of Interview	
Start Time	
End Time	
Practice: Person Playing the Role of an Independent Assessor - Additional Comments:	

Please indicate the apprentice's practice interview based on an EPA Portfolio grade	Distinction	Pass	Fail
	☐	☐	☐

By signing below, I confirm that the information provided is correct and the practice grade awarded is a true reflection of the performance by the apprentice.

Person playing the role of an Independent Assessor Full Name and Signature:	**Date:**

Please Note:
To achieve a Pass, the Apprentice must achieve **all** of the Pass descriptors.
To achieve a Distinction the Apprentice must achieve **all** of the Pass and Distinction descriptors.
Fail: The apprentice does not demonstrate the Pass descriptors.

Introduction
At the start of the interview based on an EPA portfolio the assessor will: • Introduce themselves • State their role • State the date of the interview • Request and confirm ID from the apprentice prior to beginning the assessment • Provide apprentice with information on the format of the with questions, including the timescales they will be working to The apprentice will: • Confirm their full name and date of birth • Give their employer's name • Confirm their location and that no one else is present in the room, if remote apprentice to pan camera 360º • Confirm they are prepared for the interview; and confirm they can continue with the interview • Confirm that the evidence within the portfolio relates to the KSB's that will be assessed during the interview
Important points to inform the apprentice
• Please do not judge anything by the notes being taken, nor infer anything positive or negative from how long the interview lasts • Please do not consider me rude if I tell you that we need to move onto the next question. This will ensure that you get the opportunity to fully demonstrate your competencies within the time allowed • Please ensure that your mobile is switched off or placed somewhere where you will not be interrupted during the interview • Confirm that a sign is placed on the door of the assessment room. 'Assessment in progress - Do not disturb' Note: The live interview will be fully recorded for the purpose of audit and quality assurance

Independent Assessor Guidance
Delivery • The interview **must last 90 minutes**. An additional 10% is allowed for the apprentice to complete their last answer • The person playing the role of the independent assessor **must ask a minimum of ten questions** • Questions should be adapted to the apprentice's circumstances following a review of their EPA portfolio evidence • Additional follow-up questions are allowed to seek clarification and to make a judgement against grading descriptor • Please work through the sections in the order they appear within this document • Answers to questions must be recorded. Timeline each question to the recording. Only log the time for the start of each question asked • All questions and responses must be recorded on this document • Supply brief written notes where each descriptor has been met • If the apprentice does not achieve a descriptor, provide written notes that you can feed back to the apprentice to help the apprentice prepare for the live assessment At the end of the professional interview - Thank the apprentice for their time

Theme: Responsibilities and continual improvement (Core)		
To achieve a Pass apprentice must demonstrate **all** of the Pass descriptors To achieve a Distinction apprentice must demonstrate **all** of the Pass descriptors and **all** of the Distinction descriptors	P/D	Assessor comments to justify the evidence seen and outcomes achieved
Role, responsibilities and requirements (Core)		
Pass: Describes the responsibilities, reporting channels and limits of autonomy applicable to their role and how they work in line with industry legislative requirements, standards and regulatory requirements, including those related to materials in contact and food-grade lubricants and OfWAT's Asset Management Periods. (K2, K5, S1)	☐	
Distinction: Explains the benefits and importance for individuals and the business of complying with water industry standards, legislative and regulatory requirements and the consequences of non-compliance. (K2, K5, S1)	☐	
Continual improvement and CPD (Core)		
Pass: Describes how they have sought to improve ways of working by applying a continuous improvement technique to devise a suggestion for asset or process optimisation or improvement. (K18, S12, B3)	☐	
Distinction: Justifies the potential impact of their improvement suggestions with consideration to benefits and potential risks. (K18, S12, B3)	☐	
Pass: Outlines the learning and development activities they have carried out and shows a commitment to future continued	☐	

professional development of self and others to maintain and enhance competence. (S14, B7)		
Questions asked: Develop open ended questions to help evidence the descriptors above.		
Write down the follow up questions asked:		
Summary of response to question(s):		
Feedback that you can provide to the apprentice if the apprentice has failed to meet the descriptors above.		

Portfolio reference		**Time of question(s)**	
		Fail	☐
		Pass	☐
		Distinction	☐

K2: Awareness of water industry legislative and regulatory requirements. Materials in contact (WRAS approved), food grade lubricants. Asset Management Periods.
K5: Water industry maintenance technician role, responsibilities, limits of autonomy and reporting channels.
K18: Continuous improvement techniques. Asset and process optimisation.
S1: Work in line with water industry standards and regulatory requirements.
S12: Apply continuous improvement techniques. Devise suggestions for improvement.
S14: Carry out and record learning and development activities.
B3: Seek to improve ways of working.
B7: Committed to maintaining and enhancing competence of self and others through Continued Professional Development (CPD).

Theme: Health, safety, security, environment and sustainability (Core)		
To achieve a Pass apprentice must demonstrate **all** of the Pass descriptors To achieve a Distinction apprentice must demonstrate **all** of the Pass descriptors and **all** of the Distinction descriptors	P/D	Assessor comments to justify the evidence seen and outcomes achieved
Pass: Outlines the personal hygiene risks and requirements for working on a water treatment or wastewater treatment site. (K16)	☐	
Pass: Describes how they comply with sustainability principles and consider the environmental impact of water industry operations in their role, in line with organisational procedures, regulations and standards for material reuse and recycling. (K10, S5, B2)	☐	
Pass: States the ATEX and DSEAR regulations which they must follow when working in and around explosive atmospheres. (K8)	☐	
Pass: Explains how they identify issues and take responsibility for their own actions when following organisational asset security requirements for site access, documentation and securing assets. (K12, S15, B6)	☐	
Pass: Describes how they comply with their employer's process safety, process risk assessments and incident management procedures. (K17)	☐	
Distinction: Explains the benefits to themselves and the business of complying with the company's process safety, process risk assessments and incident management procedures. (K17)	☐	

Questions asked: Develop open ended questions to help evidence the descriptors above.			
Write down the follow up questions asked:			
Summary of response to question(s):			
Feedback that you can provide to the apprentice if the apprentice has failed to meet the descriptors above.			
Portfolio reference		**Time of question(s)**	
		Fail	☐
		Pass	☐
		Distinction	☐

K8: Dangerous Substances and Explosive Atmospheres Regulations (DSEAR). ATEX compliance (safety requirements of the workplace and equipment used in explosive atmospheres). Working in and around explosive atmospheres. Hazardous areas (DSEAR zones). PPE. Intrinsically safe tools for working in explosive atmospheres. Exposure limits. Necessary forced pre-ventilation. Gas monitoring equipment.
K10: The impact water industry operations have on the environment.
K12: Asset security requirements.
K16: Personal hygiene risks and requirements for working on a water treatment or a wastewater treatment site.
K17: Water industry process safety and process risk assessments. Incidents and emergency situations (internal and external): pollution, loss of process, security, weather, and accidents: their potential impact. Incident management and procedures. The risk of pollution and untreated water in supply.
S5: Comply with sustainability principles. Segregate waste for recycling, reuse or disposal.
S15: Comply with security procedures. For example, site access, document classification, and securing assets.
B2: Considers the environment and sustainability.
B6: Identifies issues and takes responsibility for actions.

Theme: Working with others (Core)		
To achieve a Pass apprentice must demonstrate **all** of the Pass descriptors To achieve a Distinction apprentice must demonstrate **all** of the Pass descriptors and **all** of the Distinction descriptors	P/D	Assessor comments to justify the evidence seen and outcomes achieved
Equity and diversity (Core)		
Pass: Describes how they promote inclusivity in the workplace with colleagues, stakeholders and customers by applying the principles, policies and practices of equity, diversity and inclusion, taking account of unconscious bias. (K19, S10, B4)	☐	
Team working and communication		
Pass: Describes how they collaborate and promote teamwork across disciplines by applying team working principles in line with organisational policy. (K20, S11, B5)	☐	
Pass: Describes how they communicate with and provide support, technical advice, work updates and information in their work that are suitable for the context. (K21, S13)	☐	
ICT and digital		
Pass: Describes how they use information and digital technology to collect, interpret and use data and information, in compliance with cyber security regulations and policies and GDPR. (K22, S9)	☐	

Distinction: Outlines the benefits to themselves and the business of ensuring GDPR and cyber security regulations and policies are followed. (K22, S9)	☐	
Questions asked: Develop open ended questions to help evidence the descriptors above.		
Write down the follow up questions asked:		
Summary of response to question(s):		
Feedback that you can provide to the apprentice if the apprentice has failed to meet the descriptors above.		

Portfolio reference		**Time of question(s)**	
		Fail	☐
		Pass	☐
		Distinction	☐

K19: Principles of equity, diversity, and inclusion in the workplace. Unconscious bias.
K20: Team working principles.
K21: Non-written communication methods and techniques. Engineering maintenance terminology.
K22: Information technology and digital: digital interfaces, email, Management Information Systems (MIS), spreadsheets, presentation, word processing, virtual communication, learning platforms, work collaboration platforms. General Data Protection Regulation (GDPR). Cyber security.
S9: Collect, interpret and use data and information using information and digital technology. Comply with GDPR and cyber security regulations and policies.
S10: Apply equity, diversity and inclusion policies and practices.
S11: Apply teamworking principles.
S13: Communicate with and provide support, technical advice, work updates and information to technical and non-technical colleagues and other stakeholders.
B4: Promote inclusivity in the workplace with colleagues, stakeholders, and customers.
B5: Collaborate and promote teamwork across disciplines
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Theme: Planning for work (Core)		
To achieve a Pass apprentice must demonstrate **all** of the Pass descriptors	P	Assessor comments to justify the evidence seen and outcomes achieved
Pass: Describes how they plan, prioritise and schedule maintenance, installation or repair work, taking into account process safety, risk assessments and the impact on the environment and water treatment or wastewater recycling. (K11, S2)	☐	
Pass: Describes the planned, preventative, predictive and reactive maintenance strategies and techniques used in their workplace and outlines the frequency of each method in accordance with company procedures. (K14)	☐	
Pass: Explains how they select, check, store and maintain tools and equipment in line with manufacturers' guidelines and operating instructions, including calibration checks. (K13, S6)	☐	
Questions asked: Develop open ended questions to help evidence the descriptors above.		
Write down the follow up questions asked:		
Summary of response to question(s):		
Feedback that you can provide to the apprentice if the apprentice has failed to meet the descriptors above.		

Portfolio reference		**Time of question(s)**	
		Fail	☐
		Pass	☐

K11: Planning, prioritising, work scheduling and time management approaches.
K13: Tools and equipment used in maintenance and repair tasks. Operational checks, calibration, storage and maintenance requirements.
K14: Maintenance strategies and techniques: planned, preventative, predictive and reactive methods and their frequency.

S2: Plan maintenance work, taking into consideration: process safety and following process risk assessments; the impact work has on the environment and on water treatment or wastewater recycling.
S6: Select, check store and maintain equipment and tools.

Theme: Work activities (Instrumentation, control and automation)		
To achieve a Pass apprentice must demonstrate **all** of the Pass descriptors To achieve a Distinction apprentice must demonstrate **all** of the Pass descriptors and **all** of the Distinction descriptors	P/D	Assessor comments to justify the evidence seen and outcomes achieved
Installation, commissioning and decommissioning		
Pass: Describes the practices and techniques they use to install, commission and decommission ICA equipment in line with manufacturers' requirements and wiring regulations. (K51, K61, S46)	☐	
Pass: Describes how they interpret and use design specifications, plans drawings and manufacturers' instructions to install different cable types and terminate in accordance with the specification and task requirements. (K60, K64, S54, S58)	☐	
Calibration, configuration and software		
Pass: Describes how they test telemetry signals and configure outstations, field instrumentation, communication devices and equipment used in system and process control in line with manufacturers' instructions. (K57, K65, S50, S59)	☐	
Pass: Describes how they use software to produce programs used in the control system, to meet task requirements. (K66, S60)	☐	
Distinction: Justifies their choice of software and explains how the steps of their written program met the task requirements. (K66, S60)	☐	

Pass: Explains how they monitor and analyse data to make evidence-based changes in line with task requirements. (K67, S63)	☐	
Fault finding and problem solving		
Pass: Describes how they use fault finding, problem-solving and rectification techniques, aids and diagnostic equipment to fault find, identify a problem, and any underlaying causes before providing a solution in line with the task requirements. (K58, S52, S62)	☐	
Distinction: Justifies fault finding and problem-solving techniques they have used in the rectification of faults. (K58, S52)	☐	
Questions asked: Develop open ended questions to help evidence the descriptors above.		
Write down the follow up questions asked:		
Summary of response to question(s):		
Feedback that you can provide to the apprentice if the apprentice has failed to meet the descriptors above.		

Portfolio reference		**Time of question(s)**	
		Fail	☐
		Pass	☐

K51: Practices and techniques for the installation, commissioning and decommissioning of ICA equipment.
K57: Field instrumentation, communication devices and equipment used in system and process control. To include: Human Machine Interfaces (HMIs), Programmable Logic Controllers (PLC), Supervisory Control and Data Acquisition (SCADA) systems, back up procedures. Configuration procedures and requirements.
K58: Fault finding, problem solving and rectification techniques. Aids and diagnostic equipment.

K60: Design specifications, plans, drawings and manufacturer's instructions.
K61: Awareness of wiring regulations - purpose and importance.
K64: Cable types and termination methods. Specification and application.
K65: Telemetry signals and outstations configuration.
K66: Software and logic used within the control system.
K67: Data analysis and monitoring techniques.
S46: Install, commission and decommission ICA equipment.
S50: Configure field instrumentation, communication devices and equipment used in system and process control.
S52: Carry out fault finding techniques for instrumentation and control equipment. Use diagnostic equipment.
S54: Interpret and use design specifications, plans, drawings and manufacturer's instructions.
S58: Install different cable types and terminate to their specifications and applications.
S59: Test telemetry signals and configure outstations.
S60: Use software to produce programs to be used within the control system.
S62: Identify a problem, investigate problem to identify the underlying cause. Identify a solution.
S63: Analyse and monitor data to make evidence based changes if required.