

# UET ICA Technician Portfolio and Grading Guidance

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ENERGY & UTILITIES  
INDEPENDENT  
ASSESSMENT SERVICE

Full Name of Apprentice		Full Name of Technical Expert	
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To achieve a <b>PASS</b> score the apprentice must achieve <b>ALL</b> of the following:		No distinction criteria or score are allocated to this section	
6	<input type="checkbox"/>	N/A	
Evidence relating to the UET Standard			
<b>K1</b> Relevant industry health and safety standards and regulations, and environmental and regulatory requirements			
<b>S2</b> Follow and comply with industry health and safety and environmental working practices and regulations			
<b>S10</b> Adhere to safe working practices and procedures and carry out risk assessments			
To achieve a pass the apprentice must have evidence of:	<input type="checkbox"/>	<input type="checkbox"/>	• N/A
• Knowledge of where to access and how to apply industry Health, Safety & Environmental standards and regulations in relation to company practices and quality procedures	<input type="checkbox"/>	<input type="checkbox"/>	
• Conform to risk assessment process in relation to company practices and procedures	<input type="checkbox"/>	<input type="checkbox"/>	
• Knowledge of and compliance with company standards and procedures as applicable e.g. COSHH, PPE, confined spaces, working at height, isolation of plant and equipment etc	<input type="checkbox"/>	<input type="checkbox"/>	
• Compliance with environmental regulations and standards e.g. correct disposal of wastes	<input type="checkbox"/>	<input type="checkbox"/>	

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To achieve a <b>PASS</b> score the apprentice must achieve <b>ALL</b> of the following:		To achieve a <b>DISTINCTION</b> score the apprentice must achieve <b>ALL</b> of the following:	
6	<input type="checkbox"/>	3	<input type="checkbox"/>
Evidence relating to the UET Standard			
<p><b>K2</b> Maintenance practices, processes and procedures covering a range of waste and water systems, plant and equipment</p> <p><b>K5</b> Planned, reactive, and predictive maintenance processes, practices and procedures</p> <p><b>S4</b> Carry out maintenance activities on a range of waste and water systems, plant and equipment</p> <p><b>S6</b> Carry out and follow planned, reactive, and predictive plant and equipment maintenance procedures</p>			
<p>To achieve a pass the apprentice must have evidence of:</p> <ul style="list-style-type: none"> <li>• Knowledge of where to access company information on maintenance practices, processes and procedures <input type="checkbox"/></li> <li>• Applying company maintenance practices, policies and procedures when carrying out tasks <input type="checkbox"/></li> <li>• Completion of maintenance tasks in a timely manner across the whole range of work processes, systems and equipment <input type="checkbox"/></li> <li>• Understanding of relevant parameters of equipment and how the equipment works <input type="checkbox"/></li> <li>• Record &amp; report outcomes of maintenance activities <input type="checkbox"/></li> </ul>		<p>To achieve distinction the apprentice must achieve the pass criteria and <b>ALL</b> of the following:</p> <ul style="list-style-type: none"> <li>• Able to reflect critically of performance achieved and lessons learnt <input type="checkbox"/></li> <li>• Detailed explanation of the underpinning theories of how the equipment works <input type="checkbox"/></li> <li>• Able to prioritise work to ensure that downtime is minimised and give explanations of the rationale for their choice(s). This could be achieved by applying 2 of the following: -                             <ul style="list-style-type: none"> <li>○ Solving problems <input type="checkbox"/></li> <li>○ Making suggestions <input type="checkbox"/></li> <li>○ Dealing with conflict <input type="checkbox"/></li> </ul> </li> </ul>	

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6	<input type="checkbox"/>	3	<input type="checkbox"/>
<b>Evidence relating to the UET Standard</b>			
<b>K4</b> Principles and processes that underpin the location, diagnosis and rectification of faults			
<b>S3</b> Locate, diagnose and rectify faults on plant and equipment			
To achieve a pass the apprentice must have evidence of: <ul style="list-style-type: none"> <li>• Knowledge of fault-finding techniques</li> <li>• Locating, identifying and rectifying faults</li> <li>• Consulting and working with others to investigate, identify and resolve cause of the problem</li> <li>• Understanding of relevant operating parameters of any equipment and how the equipment works</li> </ul>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	To achieve distinction the apprentice must achieve the pass criteria plus <b>ALL</b> of the following: <ul style="list-style-type: none"> <li>• Demonstration of independent use of root cause analysis to fault find and rectify diagnosed faults</li> <li>• Proposing solutions to prevent the reoccurrence of the problem</li> </ul>	<input type="checkbox"/> <input type="checkbox"/>

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4	<input type="checkbox"/>	2	<input type="checkbox"/>
Evidence relating to the UET Standard			
<b>S5</b> Use workshop machinery and equipment to create, repair and modify component and apparatus			
<p>To achieve a <b>PASS</b> the apprentice must have evidence of:</p> <ul style="list-style-type: none"> <li>Using workshop machinery to create, repair and modify components. This could include:                             <ul style="list-style-type: none"> <li>Drills <input type="checkbox"/></li> <li>Grinders <input type="checkbox"/></li> <li>Bearing heaters and/or pullers <input type="checkbox"/></li> <li>Test bench <input type="checkbox"/></li> <li>Other <input type="checkbox"/></li> </ul> </li> <li>Understanding of relevant parameters of equipment and how the equipment works. <input type="checkbox"/></li> </ul>	<input type="checkbox"/>	<p>To achieve <b>DISTINCTION</b> the apprentice must achieve the pass criteria plus the following:</p> <ul style="list-style-type: none"> <li>Provide evidence of a piece of equipment that you have created, repaired and modified and returned to operational condition. This could include but is not limited to:                             <ul style="list-style-type: none"> <li>Transmitter repairs <input type="checkbox"/></li> <li>Calibrations <input type="checkbox"/></li> <li>Function tests <input type="checkbox"/></li> <li>Support brackets <input type="checkbox"/></li> <li>Other <input type="checkbox"/></li> </ul> </li> </ul>	<input type="checkbox"/>

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To achieve a <b>PASS</b> score the apprentice must achieve <b>ALL</b> of the following:		To achieve a <b>DISTINCTION</b> score the apprentice must achieve the following:	
6	<input type="checkbox"/>	3	<input type="checkbox"/>
Evidence relating to the UET Standard			
<b>S11</b> Carry out safe isolation of equipment, using permit and lock-off systems as required <b>S45</b> Carry out isolation procedures to ensure process or system stability and personnel safety when carrying out operations			
To achieve a <b>PASS</b> the apprentice must have evidence of: <ul style="list-style-type: none"> <li>• Identifying hazards and risks and apply control measures</li> <li>• Safely isolate equipment from all sources of energy</li> <li>• Test to confirm equipment has been isolated</li> <li>• Follow company isolation procedures</li> </ul>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	To achieve <b>DISTINCTION</b> the apprentice must achieve the pass criteria plus the following: <ul style="list-style-type: none"> <li>• Take a leading role in the application of isolations</li> </ul>	<input type="checkbox"/>

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To achieve a <b>PASS</b> score the apprentice must achieve <b>ALL</b> of the following:		No distinction criteria or score are allocated to this section
3	<input type="checkbox"/>	N/A
Evidence relating to the UET Standard		
<b>S12</b> Drive vehicles equipped with tools and materials to job sites		
To achieve a <b>PASS</b> the apprentice must have evidence of: <ul style="list-style-type: none"> <li>• Full driving licence or demonstrate progress to working towards achieving a full driving licence</li> <li>• Complying with company driving procedures</li> <li>• Carry out vehicle checks</li> <li>• Safely load vehicles.</li> </ul>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<ul style="list-style-type: none"> <li>• N/A</li> </ul>

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To achieve a <b>PASS</b> score the apprentice must achieve <b>ALL</b> of the following:		To achieve a <b>DISTINCTION</b> score the apprentice must achieve the following:	
4	<input type="checkbox"/>	2	<input type="checkbox"/>
<b>Evidence relating to the UET Standard</b>			
<p><b>S13</b> Install, maintain, replace and commission equipment and components as required</p> <p><b>S14</b> As required, undertake standby duties to provide 24-hour cover to remedy fault situations requiring diagnostic testing procedures</p> <p><b>S8</b> Handover and confirm completion of engineering activities</p>			
<p>To achieve a <b>PASS</b> the apprentice must have evidence of:</p> <ul style="list-style-type: none"> <li>• Complete dynamic risk assessments (where applicable)</li> <li>• Install, maintain, replace and commission equipment</li> <li>• Complete engineering activities and handing over equipment</li> <li>• Follow company completion and handover procedures.</li> <li>• Communicate completion and handover information to colleagues</li> <li>• Refer to technical drawings to confirm specification</li> <li>• If required, demonstrates a willingness to undertake priority out of hours work activities</li> <li>• Provide an explanation of the hazards of working alone out of hours in line with the company procedures</li> </ul>	<input type="checkbox"/>  <input type="checkbox"/>  <input type="checkbox"/>  <input type="checkbox"/>  <input type="checkbox"/>  <input type="checkbox"/>  <input type="checkbox"/>  <input type="checkbox"/>	<p>To achieve <b>DISTINCTION</b> the apprentice must achieve the pass criteria plus the following:</p> <ul style="list-style-type: none"> <li>• Provide evidence of an action you have applied that improved the performance and reliability of plant and equipment</li> </ul>	<input type="checkbox"/>

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4	<input type="checkbox"/>	2	<input type="checkbox"/>
Evidence relating to the UET Standard			
<b>S35</b> Apply theories and principles of electronics to use equipment to carry out diagnostic fault-finding procedures			
To achieve a <b>PASS</b> the apprentice must have evidence of: <ul style="list-style-type: none"> <li>• Knowledge of instrument and control theories and principles for diagnostic fault finding</li> <li>• Apply knowledge gained to identify faults</li> <li>• Reinstatement of plant to operational condition</li> <li>• Use company recording and reporting procedures</li> </ul>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	To achieve <b>DISTINCTION</b> the apprentice must achieve the pass criteria plus <b>ALL</b> of the following: <ul style="list-style-type: none"> <li>• Demonstrate an understanding of the benefits of analysing past history on faults</li> <li>• Demonstrate an understanding of the benefits of analysing data over an extended period to obtain more reliable results</li> </ul>	<input type="checkbox"/> <input type="checkbox"/>



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To achieve a <b>PASS</b> score the apprentice must achieve <b>ALL</b> of the following:		To achieve a <b>DISTINCTION</b> score the apprentice must achieve <b>THREE</b> of the following:	
5	<input type="checkbox"/>	3	<input type="checkbox"/>
Evidence relating to the UET Standard			
<b>S36</b> Maintain instrumentation and control equipment and circuits, and repair and overhaul instrumentation and control equipment <b>S1</b> Apply technical knowledge to carry out inspections, condition monitoring and reporting			
To achieve a <b>PASS</b> the apprentice must have evidence of: <ul style="list-style-type: none"> <li>• Maintenance of instrument and control equipment and systems.</li> <li>• Repairing of instrument and control equipment.</li> <li>• Identify any defects and their causes.</li> <li>• Ensure equipment is calibrated and in date where identified.</li> <li>• Use company recording and reporting procedures.</li> </ul>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	To achieve <b>DISTINCTION</b> the apprentice must achieve the pass criteria plus <b>THREE</b> of the following: <ul style="list-style-type: none"> <li>• Raising appropriate follow on work requests based on data from inspections / data monitoring.</li> <li>• Identify non-compliances and take actions to rectify problems not specified in scope of work.</li> <li>• Identify root cause of a defect and provide recommendations for solutions.</li> <li>• Identification of spares.</li> </ul>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

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To achieve a <b>PASS</b> score the apprentice must achieve <b>ALL</b> of the following:		To achieve a <b>DISTINCTION</b> score the apprentice must achieve <b>ALL</b> of the following:	
5	<input type="checkbox"/>	3	<input type="checkbox"/>
Evidence relating to the UET Standard			
<p><b>S37</b> Test and calibrate instrumentation and control equipment and circuits, and assist in installing instrumentation and control equipment</p> <p><b>S41</b> Test, calibrate and validate fixed and portable analogue and digital instrumentation using approved procedures and standards</p>			
To achieve a <b>PASS</b> the apprentice must have evidence of: <ul style="list-style-type: none"> <li>• Examples of testing, calibration and validation methods.</li> <li>• Identification of correct materials for the task.</li> <li>• Follow installation procedures for installing instrument and control equipment.</li> <li>• Install new electrical equipment and systems to specification.</li> </ul>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	To achieve <b>DISTINCTION</b> the apprentice must achieve the pass criteria plus <b>ALL</b> of the following: <ul style="list-style-type: none"> <li>• Understand the impact the unavailability of equipment would have on production.</li> <li>• Analyse and evaluate defects and their causes</li> <li>• Make recommendations to improve reliability</li> </ul>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

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To achieve a <b>PASS</b> score the apprentice must achieve <b>ALL</b> of the following:		To achieve a <b>DISTINCTION</b> score the apprentice must achieve <b>TWO</b> of the following:	
4	<input type="checkbox"/>	2	<input type="checkbox"/>
<b>Evidence relating to the UET Standard</b>			
<p><b>S39</b> Carry out telemetry outstation and internal system configuration</p> <p><b>S43</b> Use standards and specifications to improve the information gathered by telemetry data</p> <p><b>S40</b> Identify and resolve data quality and calibration issues</p>			
To achieve a <b>PASS</b> the apprentice must have evidence of: <ul style="list-style-type: none"> <li>• Correctly interpret data from process measurement devices and/or control systems to local/remote displays <input type="checkbox"/></li> <li>• Configuration of telemetry outstation systems and / or internal systems <input type="checkbox"/></li> <li>• Knowledge of telemetry data gathering standards and specifications <input type="checkbox"/></li> <li>• Demonstrate or describe how to resolve data quality and / or calibration errors <input type="checkbox"/></li> </ul>		To achieve <b>DISTINCTION</b> the apprentice must achieve the pass criteria plus <b>TWO</b> of the following: <ul style="list-style-type: none"> <li>• Make suggestions for improvements to telemetry data gathering. <input type="checkbox"/></li> <li>• Make specification changes to telemetry systems in line with company procedures <input type="checkbox"/></li> <li>• Knowledge of how to access technical information via company systems <input type="checkbox"/></li> </ul>	

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5	<input type="checkbox"/>	3	<input type="checkbox"/>
Evidence relating to the UET Standard			
<p><b>S42</b> Repair, maintain, configure and calibrate field instrumentation, communication devices and associated equipment used in system and process control, such as Programmable Logic Controllers (PLC) and Supervisory Control &amp; Data Acquisition (SCADA) systems</p> <p><b>S9</b> Read, understand and interpret computer data and displays, and work to technical specifications and supporting documentation</p> <p><b>S38</b> Use Instrumentation and Control Systems knowledge and skills to install, maintain and dismantle instruments, controllers, probes, attachments, cabling, meters and display units</p> <p><b>S44</b> Inspect and maintain security equipment, telecommunication devices and alarm systems</p>			
<p>To achieve a <b>PASS</b> the apprentice must have evidence of:</p> <ul style="list-style-type: none"> <li>• Select and set up appropriate calibration/test equipment <input type="checkbox"/></li> <li>• Repairing, maintaining, dismantling and calibrating instrumentation <input type="checkbox"/></li> <li>• Correctly install, maintain and dismantle a range ICA equipment, including <b>THREE</b> of the following:                             <ul style="list-style-type: none"> <li>• Pressure transmitters <input type="checkbox"/></li> <li>• Level transmitters <input type="checkbox"/></li> <li>• Temperature transmitters <input type="checkbox"/></li> <li>• Control valves <input type="checkbox"/></li> <li>• Flow transmitters <input type="checkbox"/></li> <li>• Analysers <input type="checkbox"/></li> </ul> </li> <li>• Check for alarm/trip functionality and as required, security of equipment in line with hazardous area specification <input type="checkbox"/></li> <li>• On completion of work re-commission equipment into operational service <input type="checkbox"/></li> <li>• Use company recording and reporting procedures. <input type="checkbox"/></li> <li>• Understanding the importance of backing up program logic and the procedures to follow <input type="checkbox"/></li> </ul>		<p>To achieve distinction the apprentice must achieve the pass criteria plus <b>TWO</b> of the following:</p> <ul style="list-style-type: none"> <li>• Research of and recommendation for use of new technology <input type="checkbox"/></li> <li>• Knowing their levels of responsibility in relation to the implementation of changes to program logic <input type="checkbox"/></li> <li>• Analysing past history of fault to establish the root cause of the problem <input type="checkbox"/></li> <li>• Identification of spares usage and order request <input type="checkbox"/></li> </ul>	

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3	<input type="checkbox"/>	1	<input type="checkbox"/>
Evidence relating to the UET Standard			
<p><b>S46</b> Provide support to day-to-day users of instrumentation and control systems</p> <p><b>S7</b> Communicate with and provide information and guidance to contractors, suppliers and colleagues in line with personal role and responsibilities</p>			
<p>To achieve a <b>PASS</b> the apprentice must have evidence of:</p> <ul style="list-style-type: none"> <li>• Communicating and providing information and guidance to end users</li> <li>• Deliver a polite and courteous service to relevant people</li> <li>• Provision of accurate verbal and written reports in line with company policy and procedures</li> </ul>	<input type="checkbox"/>  <input type="checkbox"/> <input type="checkbox"/>	<p>To achieve <b>DISTINCTION</b> the apprentice must achieve the pass criteria plus the following:</p> <ul style="list-style-type: none"> <li>• Evidence of explaining to others complex issues in simple terms and language appropriate to the third parties</li> </ul>	<input type="checkbox"/>

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3	<input type="checkbox"/>	N/A
Evidence relating to the UET Standard		
<b>S47</b> Complete data cleansing to ensure consistent and valid data is available for business and regulation purposes		
To achieve a <b>PASS</b> the apprentice must have evidence of: <ul style="list-style-type: none"> <li>• Carrying out end to end testing to required company standard</li> <li>• Ensuring data is captured and presented in the relevant format</li> <li>• Ensuring data is relevant and of the quality required</li> </ul>	<input type="checkbox"/>  <input type="checkbox"/>  <input type="checkbox"/>	<ul style="list-style-type: none"> <li>• N/A</li> </ul>

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6	<input type="checkbox"/>	3	<input type="checkbox"/>
Evidence relating to the UET Standard			
<p><b>The 12 behaviours from the UET standard are:</b></p> <ul style="list-style-type: none"> <li>• Display a self-disciplined, self-motivated approach whilst recognising personal limitations and seeking advice from fact holders and specialists when required</li> <li>• Accept responsibility for work of self or others</li> <li>• Deliver a polite, courteous professional service to customers and members of the public</li> <li>• Work effectively and safely when undertaking tasks to approved standards and safe working practices as part of a team, working alone or with appropriate supervision</li> <li>• Undertake and complete work in a way that contributes to sustainable development</li> <li>• Be risk aware and minimise risks to life, property and the environment when undertaking work activities</li> <li>• Be quality focussed and professional in work and in personal standards Identify, organise and use resources effectively to complete tasks, with consideration for cost, quality, safety, security and environmental impact</li> <li>• Accept, allocate and supervise technical and other tasks</li> <li>• Be aware of the needs and concerns of others, especially where related to diversity and equality</li> <li>• Carry out and record CPD necessary to maintain and enhance competence</li> <li>• Exercise responsibilities in an ethical manner</li> </ul>			
<p>To achieve a <b>PASS</b> the apprentice must have evidence of:</p> <ul style="list-style-type: none"> <li>• Achieving tasks within personal area of responsibility</li> <li>• Willingly accepting ownership and responsibility for own work and that of others</li> <li>• Responding to all customer requests promptly and interacting with them in a courteous and co-operative manner</li> </ul>	<input type="checkbox"/>  <input type="checkbox"/>  <input type="checkbox"/>	<p>To achieve <b>DISTINCTION</b> the apprentice must achieve the pass criteria plus evidence of the following:</p> <ul style="list-style-type: none"> <li>• Establishing and continuously maintaining effective working relationship</li> <li>• Effectively adapting communication style and methods to suit the situation</li> </ul>	<input type="checkbox"/>  <input type="checkbox"/>  <input type="checkbox"/>

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<ul style="list-style-type: none"> <li>• Consistently following policies and procedures, taking personal responsibility for their own health, safety &amp; security and that of anyone who may be affected by their actions</li> <li>• Appreciating how the role can impact the environment</li> <li>• Complying with standard operating practices and being aware of the impact of changing circumstances on an activity</li> <li>• Taking responsibility for own performance achieving required standards</li> <li>• Ensuring tasks are understood and the outline plan is clear to follow</li> <li>• Establishing and maintaining rapport with others</li> <li>• Understanding the importance of maintaining personal competence and recording progress</li> <li>• Acting in a fair and honest manner and trying 'to do the right thing' most of the time</li> </ul>	<input type="checkbox"/>  <input type="checkbox"/> <input type="checkbox"/>  <input type="checkbox"/>  <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<ul style="list-style-type: none"> <li>• Always being tactful, considerate, fair and respectful in dealing with others</li> </ul>	
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Total Points (maximum 100)	Minimum points score required to achieve a Pass	Minimum points score required to achieve Distinction
100	70	85

Total Points (maximum 100)	Actual points achieve for a Pass	Actual points achieve for Distinction

You are required to provide details of how you arrived at the assessment decision recorded above based on the evidence provided by the apprentice in the Portfolio / Work Log.

Fail	<input type="checkbox"/>	Pass	<input type="checkbox"/>	Distinction	<input type="checkbox"/>

Full Name of Technical Expert	Signature of Technical Expert	Date