ENERGY & UTILITY SKILLS

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EUIAS Level 3 End-point Assessment Apprentice Guide for

Maintenance and Operations Engineering Technician

(Electrical; Mechanical; Electromechanical; Electrical System and Process Control; Control and Instrumentation; Plant Operations and Wind Turbine)
QAN 603/7266/7

EUIAS Level 3 End-point Assessment Apprentice Guide for

Maintenance and Operations Engineering Technician

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Updates to this Guide

Since the first publication of the EUIAS Maintenance and Operations Engineering Technician Apprentice Guide, the following updates have been made.

Version	Date first published	Section updated	Page(s)
V1.0	July 2023	First published	All

At A Glance Component 1: Knowledge Assessment

Date(s):	
Time:	
Location:	
Examination Conditions:	Controlled by an invigilator
Additional Requirements:	
Assessed and marked by:	EUIAS

At A Glance Component 2: Practical Observation

Date(s):	
Time:	
Location:	
Examination Conditions:	With an EUIAS assessor in your place of work or training environment
Additional Requirements:	
Assessed and marked by:	Independent assessor/EUIAS

At A Glance Component 3: Technical Interview based on a portfolio of evidence

Date(s):	
Time:	
Location:	
Examination Conditions:	With an EUIAS assessor in your place of work or training environment
Additional Requirements:	
Assessed and marked by:	Independent assessor/EUIAS

Introduction

EUIAS has been selected by your employer to carry out end-point assessment (EPA) and it is our job to ensure that you are assessed fairly.

How This Apprentice Guide Is Organised

- ✓ Section 1:

  What is in the Apprentice Guide?

- ✓ Section 2:

  An Apprentice's End-point Assessment Journey

- ✓ Section 3:

  End-point Assessment Components

How to Use This Guide

This guide has been split into 3 sections. You can dip into each section that you are working on where you will find useful information, practical advice, tips you need and useful dates to successfully complete your EPA.

Throughout we have used headings and cross referenced to our EPA Maintenance and Operations Engineering Technician (MOET) Specification which provides details of the EPA components.

Section 1: The Basics

What is an Apprenticeship Standard?

An apprenticeship standard is a description of your apprenticeship and it is based on the maintenance and operations engineering technician standard, which was written by employers. It contains the maintenance and operations engineering technician's job profile, and describes the knowledge, skills and behaviours (KSBs):

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

The standard can be accessed via the link below:
https://www.instituteforapprenticeships.org/apprenticeship-standards/maintenance-and-operations-engineering-technician-v1-2

What is an Assessment Plan?

An Assessment Plan is also written by employers and provides details of what is required for you to pass your end-point assessment. It includes details of what you will be assessed on, how each assessment will take place, what methods will be used and who will assess you.

EUIAS designed the end-point assessment (EPA) to meet the requirements of the Assessment Plan. The Assessment Plan can be accessed via the link below:
https://www.instituteforapprenticeships.org/media/1190/maintenance_and_operations_engineering_technician.pdf

What is an end-point assessment (EPA)?

The end-point assessment is the assessments you take at the end of your apprenticeship. Your apprenticeship will typically take 36 - 42 months. You will typically spend 36 months on-programme working towards your standard. After this you have a Gateway meeting with your employer or training provider to confirm you are ready for the end-point assessments. The words end-point means that you will be assessed at the end of your on-programme (training) to confirm you have met the standard. Your EPA will be taken in the last 6 months. The end-point assessments consist of 3 components:

- Knowledge Assessment
- Practical Observation
- Technical Interview based on your portfolio of evidence

Each component has a provisional grade and each grade is carried forward to award a final grade. You must pass all 3 components to pass your apprenticeship.

The final grade can be a Fail, Pass, Merit or Distinction.

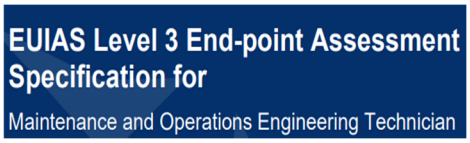
What are the Gateway Requirements?

Gateway is a meeting where your employer, training provider and you ensure that you are confident that you can demonstrate all the KSBs defined in the apprenticeship standard and you are ready for EPA. After the meeting, your training provider will confirm the outcomes of the Gateway meeting by sending a signed document to EUIAS. The document confirms that you have met the following Gateway requirements:

- achieved English and maths at Level 2
- satisfactory completion of the formal training plan agreed
- compiled a portfolio of evidence with a mapping document, which will underpin the technical interview

Your training provider will send copies of these documents to EUIAS.

What is the EPA Specification?



The end-point assessment specification provides details of the assessment methods used in your EPA, which:

- KSBs that are covered by each assessment
- KSBs amplification and guidance

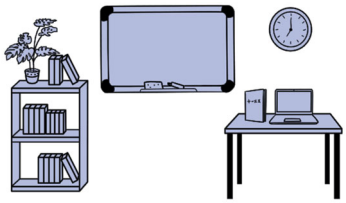
The Specifications for your job role can be accessed via the link below:

Job role	Specification Link
Electrical; Mechanical and Electromechanical	https://www.euias.co.uk/wp-content/uploads/2023/05/MOET-L3-EPA-Specification-Electrical-Mechanical-and-Electromechanical-V2.0.pdf
Electrical System and Process Control	https://www.euias.co.uk/wp-content/uploads/2023/05/MOET-L3-EPA-Specification-Electrical-System-and-Process-Control-V2.0.pdf
Control and Instrumentation	https://www.euias.co.uk/wp-content/uploads/2023/05/MOET-L3-EPA-Specification-Control-and-Instrumentation-V2.0.pdf
Plant Operations	https://www.euias.co.uk/wp-content/uploads/2023/05/MOET-L3-EPA-Specification-Plant-Operations-V2.0.pdf
Wind Turbine	https://www.euias.co.uk/wp-content/uploads/2023/05/MOET-L3-EPA-Specification-Wind-Turbine-V2.0.pdf

Section 2: Apprentice EPA Journey

Let us Begin Your EPA Journey.

Find a quiet place and read on….



Maintenance and operations Engineering Technician is a core and options apprenticeship standard. You must be trained and assessed against the core and one of the following specialisms:

- Electrical
- Mechanical
- Electromechanical
- Electrical System and Process Control
- Control and Instrumentation
- Plant Operations
- Wind Turbine

Your EPA journey consists of 3 elements:

- A training programme with on the job, off the job elements, typically 36 months
- Gateway meeting window
- End-point Assessment (EPA) typically 6 months

Your journey begins with the training program. Your employer and training provider are responsible for this part. This is where you will gain the required Knowledge, Skills and Behaviours (KSBs).

How will you be assessed in the end-point assessment?

You will be assessed on the following components, which **must** be taken in this order:

1. **Knowledge Assessment**
2. **Practical Observation**
3. **Technical Interview based on your portfolio of evidence**

It is important for you to keep a record of when your 3 components are scheduled. We suggest you use the ‘At a Glance’ tables on page 5.

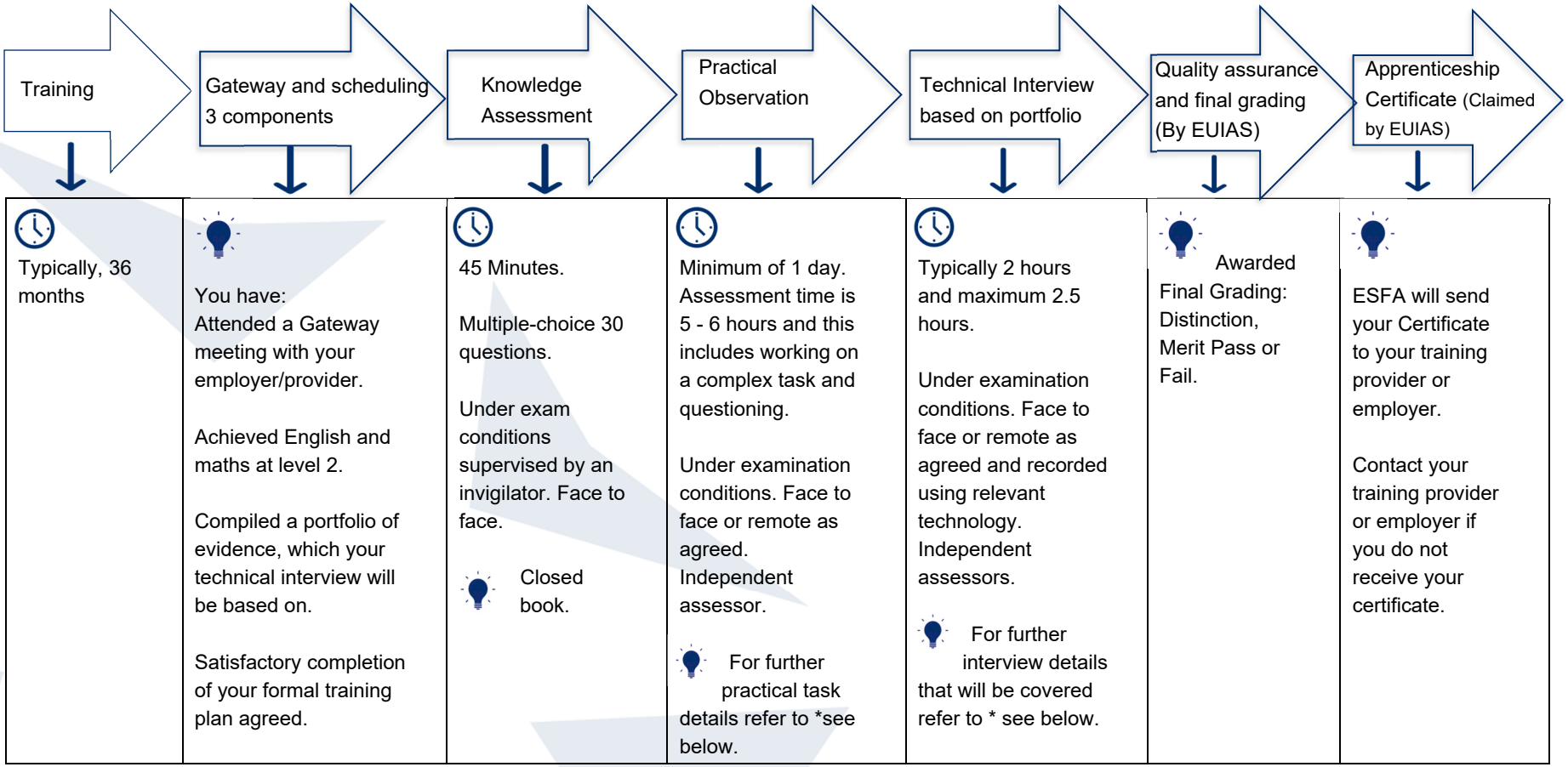
You must pass all 3 components to achieve this qualification. For further guidance refer to Section 3 End-point Assessment Components.

Reasonable adjustments

A reasonable adjustment is any action that helps to reduce the effect of a disability or difficulty that places you at a substantial disadvantage during assessments. If this applies to you make sure you tell your training provider who can make an application for a reasonable adjustment to EUIAS on your behalf.

Your EPA Journey in a Diagram

The diagram below illustrates the order of your EPA journey from the day you register to your final certification:



*For further details refer to Section 3 in this Apprentice Guide. Or Section 2 of the Specification

Section 3: End-point Assessment Components

Now let us continue your journey through EPA. There are 3 components that you must pass to be awarded a certificate.

Component 1: Knowledge Assessment

Overview

The knowledge assessment is a multiple-choice test and is paper based. You will have 45 minutes to complete the test. The test consists of 30 questions.

The multiple-choice questions will have four possible answers of which one will be correct.

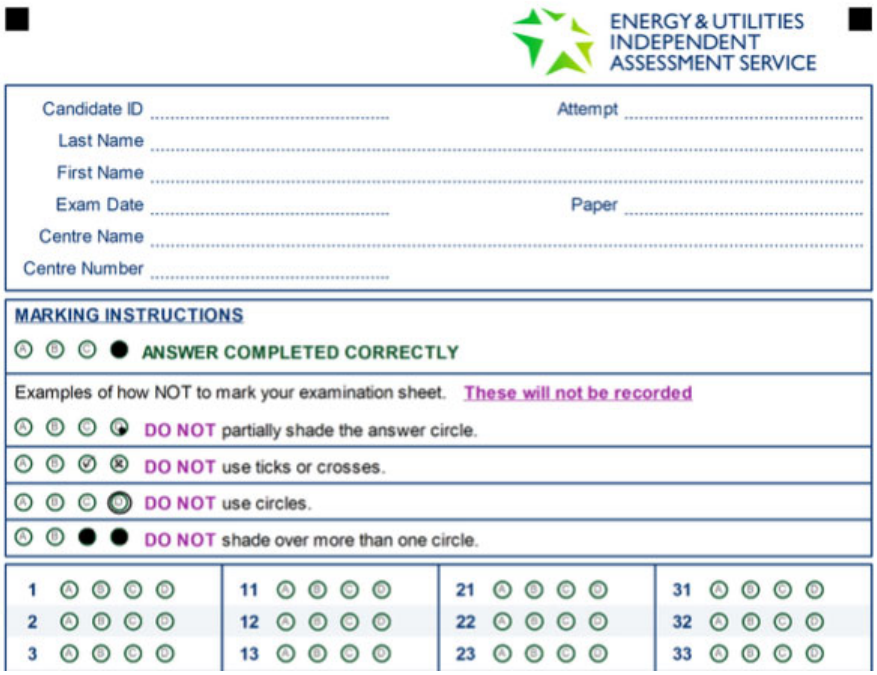
Step-by-Step Guide

The table below provides a step-by-step guide on how the knowledge assessment (multiple-choice test) will be carried out:

<table>
<tr><td>Who will start and finish your knowledge assessment?</td><td>You will sit your knowledge assessment (multiple-choice test) in the presence of an invigilator.</td></tr>
<tr><td>How will the question appear?</td><td>Here is an example of how the question will appear:

<table>
<tr><th colspan="2">Question 1</th></tr>
<tr><td colspan="2">In a workplace, who is responsible for maintaining health and safety?</td></tr>
<tr><th colspan="2">Possible answers</th></tr>
<tr><td>a)</td><td>Employers</td></tr>
<tr><td>b)</td><td>Safety managers</td></tr>
<tr><td>c)</td><td>Most senior person on-site</td></tr>
<tr><td>d)</td><td>Everyone</td></tr>
</table>

You must select one answer that you think is correct. You will be provided with an answer sheet where you will be expected to shade in the answer you have selected. Here is an example:</td></tr>
</table>

	 **Always have a go even if you are not sure that it is the correct answer.**
Can I take any resources into the exam room?	The test is closed which means that you cannot refer to reference books or any other materials. You will be provided with stationery on the day. You can take into the exam a scientific non-programmable calculator
Can I have access to the internet?	No access to the internet is allowed and this means you must not take your SMART watch into the exam room.
How will the knowledge assessment be organised for me?	**Locations:** Your knowledge assessment (multiple-choice test) will take place at your employer's or training provider's premises or a suitable venue. • You will take the test in a quiet space and in the presence of an invigilator • Your test will be scheduled by your employer or training provider with the EUIAS • If you fail the knowledge assessment (multiple-choice test), you can re-sit or re-take the failed test at your employer's discretion. There are no limits to the number of re-sits or re-takes you can take but it is important to

<table>
<tr><td></td><td>revise and ensure that you are confident with the knowledge you are being tested on</td></tr>
<tr><td>What criteria will I have to learn?

AND

How many questions will be asked on each criteria?</td><td>The knowledge assessment (multiple-choice test) questions are knowledge based and sample the 4 core knowledge criteria. Below is a list of the knowledge criteria, assessed in the knowledge assessment along with the range of questions that will be allocated to a knowledge assessment paper:

<table><tr><th>Number of Questions</th><th>Knowledge</th></tr><tr><td>6 - 8</td><td>K1:. First principles relating to the operation and maintenance of appropriate plant and equipment</td></tr><tr><td>6 - 8</td><td>K2: Relevant industry health and safety standards, regulations, and environmental and regulatory requirements</td></tr><tr><td>6 - 8</td><td>K3: Maintenance and operational practices, processes and procedures covering a range of plant and equipment</td></tr><tr><td>6 - 8</td><td>K4: The relevant engineering theories and principles relative to their occupation</td></tr></table>
Remember the questions have been written to reflect the maintenance and operations engineering technician role as a whole and are not focussed on specific plant, machinery, or employer-specific processes. For amplification and guidance refer to Section 2 of the MOET Specification.</td></tr>
<tr><td>What should I do to prepare for the knowledge assessment?</td><td>You should be prepared to:
• revise the knowledge criteria listed above (K1, K2, K3 and K4)

• ask your employer or training provider for additional questions that they have prepared to support you</td></tr>
</table>

	• attend the knowledge assessment test which will last 45 minutes While on-programme, the employer or training provider must ensure you are: • familiar with all areas assessed by the knowledge assessment test as listed above • supported in completing a practice test and provide you with constructive feedback to enable you to identify areas you need to carry out further revision in

Practice Component 3: Knowledge Assessment

You should have an opportunity to have a practice knowledge assessment test which mirrors the real assessment. The practice knowledge assessment test would be set up using the structure in the table above by your employer or training provider. The feedback provided will assist you with preparing for the actual knowledge assessment test.

Component 2: Practical Observation

Overview

A practical observation involves an independent assessor, appointed by EUIAS observing and questioning you undertaking a set complex task or a series of set complex tasks in your normal place of work in a suitable area provided you can work unhindered or in a simulated environment. The simulated environment must closely relate to your natural working environment. The complex task(s) must be capable of being completed by a competent maintenance and operations engineer.

Step-by-Step Guide

The table below provides a step-by-step guide on how the practical observation will be carried out:

Structure of your practical observation	The total assessment time is 5 – 6 hours for completing the set complex tasks and this includes time for questioning by the independent assessor • Breaks may be taken during the practical observation to allow you to move from one location to another and for meal/comfort breaks • The clock will be stopped. The assessment time is not reduced.
Where will the assessment take place?	• In your normal place of work in a suitable area provided you can work unhindered OR • In a simulated environment that reflect the real working environment and realistic work situation
What knowledge, skills and behaviours (KSBs) do I have to demonstrate during the	**Core Skills**: **S1** The relevant engineering theories and principles relative to their occupation **S2** The relevant engineering theories and principles relative to their occupation

practical observation?	**S3** Prepare work areas to undertake work related activities and reinstate those areas after the completion of the work-related activities **S4** Assess and test the performance and condition of plant and equipment **Core Skills**: Assessed in Practical Observation and Technical Interview **S5** Locate, and rectify faults on plant and equipment **S6** Read, understand and interpret information and work in compliance with technical specifications and supporting documentation **S7** Inspect and maintain appropriate plant and equipment to meet operational requirements **S8** Communicate, handover and confirm that the appropriate engineering process has been completed to specification **Electrical Role Specialist Skills** **E1** Position, assemble, install and dismantle electrical plant and equipment to agreed specifications **E2** Carry out planned, unplanned and preventative maintenance procedures on electrical plant and equipment **E3** Replace, repair and/or remove components in electrical plant and equipment and ensure its return to operational condition **E4** Diagnose and determine the cause of faults in electrical plant and equipment **Mechanical Role Specialist Skills** **M1** Position, assemble, install and dismantle mechanical plant and equipment to agreed specifications **M2** Carry out planned, unplanned and preventative maintenance procedures on mechanical plant and equipment

	M3 Replace, repair and/or remove components in mechanical plant and equipment and ensure its return to operational condition **M4** Diagnose and determine the cause of faults in mechanical plant and equipment **Electromechanical Role Specialist Skills** **EM1** Position, assemble, install and dismantle integrated electromechanical power and control systems **EM2** Carry out planned, unplanned and preventative maintenance procedures on integrated electromechanical plant and equipment **EM3** Replace, repair and/or remove components within integrated electromechanical plant and equipment and ensure its return to operational condition **EM4** Diagnose and determine the cause of faults within integrated electromechanical plant and equipment **Electrical System and Process Control Role Specialist Skills** **EP1** Position, assemble, install and dismantle integrated electrical apparatus, systems and process control equipment **EP2** Carry out planned, unplanned and preventative maintenance procedures on integrated plant and equipment **EP3** Replace, repair and/or remove components within integrated plant and equipment and ensure its return to operational condition **EP4** Diagnose determine the cause of faults within integrated plant and equipment **EP5** Calibrate and configure integrated electrical apparatus, systems and process control equipment **Control and Instrumentation Role Specialist Skills** **CI1** Position, assemble, install and dismantle plant and equipment to agreed specifications

	CI2 Carry out planned, unplanned and preventative maintenance procedures on plant and equipment **CI3** Replace, repair and/or remove components in plant and equipment and ensure its return to operational condition **CI4** Diagnose and determine the cause of faults in electrical plant and equipment **Plant Operations Role Specialist Skills** **PO1** Carry out planned operating procedures on plant and equipment **PO2** Monitor the performance of the plant and equipment **PO3** Handover and accept responsibility for plant and equipment **Wind Turbine Role Specialist Skills** **WT1** Install, assemble, commission and dismantle wind turbine plant and equipment, which will include pitch systems, yaw systems, switchgear, control systems to agreed specifications **WT2** Carry out planned, unplanned and preventative maintenance procedures on wind turbine plant and equipment including mechanical drive systems **WT3** Replace, repair and/or remove components in wind turbine plant and equipment and ensure its return to operational condition **WT4** Diagnose and determine the cause of faults in wind turbine plant and equipment **Core Behaviours**: **B1 Health and Safety:** Follows health and safety policies and procedures and be prepared to challenge unsafe behaviour using appropriate techniques to ensure the protection of people and property when working alone and/or with appropriate supervision **B2 Quality focused:** Ensures that work achieves quality standard both occupationally and personally

	B3 Working with others: Has the ability to work well with people from different disciplines, backgrounds and expertise to accomplish an activity safely and on time **B4 Interpersonal skills:** Gets along well with others and takes into account their needs and concerns **B6 Sustainability and ethical behaviour:** Behaves ethically and undertakes work in a way that contributes to sustainable development **B7 Risk awareness:** Demonstrates high concentration, the desire to reduce risks, ability to be compliant and awareness of change, through regular monitoring and checking of information **For amplification and guidance refer to the MOET Role Specific Specifications links on page 19 for links.**
What tasks will I have to cover?	• The complex task must allow you to undertake the activities required for a practical observation. For further details refer to 'Knowledge, Skills and Behaviours (KSBs) Coverage' in the role specific specification, refer to links on page 19 .
What resources can I use?	Equipment and resources needed for the observation must be: • provided by your employer or training provider • a suitable premises • the plant, machinery, equipment and PPE required for the job • in good and safe working condition Relevant work instructions/manuals must be available for you to use in hard copy or electronically.
How many questions will I be asked?	The independent assessor: • will ask open questions to assess the related underpinning knowledge. There are no stipulated number of questions that will be asked • may ask questions to follow in order to seek clarification from you
Who will assess me?	An independent assessor, appointed by EUIAS.

Provisional Grading	The independent assessor will award a provisional grade. You must pass **ALL** the pass criteria in order to achieve a pass.
Overall grading for this component	Fail, Pass, Merit or Distinction.

Practice Component 2: Practical Observation

You should have an opportunity to have a practice practical observation which mirrors the real assessment. A practice practical would be set up for you using the structure in the table above by your employer or training provider.

Component 3: Technical Interview based on Portfolio of Evidence

Overview

The technical interview is based on your portfolio of evidence. It is to allow you to demonstrate how you have met the KSBs in order to carry out your occupational role as a Maintenance and Operations Engineering Technician effectively and safely. The technical interview allows for testing of responses where there are a range of potential answers that cannot be tested through the knowledge assessment.

Step-by-Step Guide

The table below provides a step-by-step guide on how the technical interview based on the portfolio of evidence will be carried out:

Who will assess me?	2 independent assessors, appointed by EUIAS. Their roles: • One independent assessor will conduct the interview • The senior independent assessor will have the casting vote in case of outcome disagreement
How will the technical interview be organised?	**Locations:** Your technical interview will take place at your employer's premises or a suitable venue. **Time:** Your technical interview will typically last 2 hours and a maximum of 2.5 hours. **Your technical interview will be:** • a discussion between you and the independent assessor • face to face or remote, as agreed • assessed and outcomes will be recorded by the assessor on official EUIAS interview documents • recorded using the relevant technology such as Microsoft Teams or an audio recording device
What topics will I have to cover?	The technical interview will focus on each knowledge and skills listed in the grading criteria in Section 3 of the role specific specification, and each question will relate to one of the following scenarios:

	• **Scenario 1** - Position, assemble, install and dismantle plant and equipment including calibration and configuration • **Scenario 2** - Carry out planned, unplanned and preventative maintenance procedures including calibration and configuration • **Scenario 3** - Diagnose and determine the cause of faults and Replace, repair and/or remove components and ensure it is returned to operational condition **For amplification and guidance refer to the MOET role specific Specification, links available on page 9.**
How many questions will I be asked?	• The assessor will ask a set of questions to explore your level of knowledge, skills and behaviours for completing activities in each scenario • Standardised open questions will be asked based on the contents of the evidence in your portfolio • Set questions which maybe contextualised to the contents of your portfolio • Follow-up questions in order to seek clarification
Provisional Grading	The independent assessor will award a provisional grade. You must pass **ALL** the pass criteria in order to achieve a pass.
Overall grading for this component	Fail, Pass, Merit or Distinction.

Portfolio of Evidence Requirements

The requirements are as follows:

Portfolio Mapping Document You must map your portfolio of evidence to the KSBs covered by the technical interview. You must include a mapping document at the front of your portfolio that clearly references the location of the evidence in your portfolio. For further guidance on how to map refer to:

- Section below ‘How do I organise my portfolio of evidence and map it to the mapping document?’
- MOET Role Specific Specification Section 5: Guidance on portfolio of evidence and apprentice mapping
- Apprentice Guide: Appendix B for the portfolio mapping document

How do I organise my portfolio of evidence and map it to the mapping document?

Step-by-Step Guide

You must include a portfolio mapping document and place it at the front of your portfolio, see table above for guidance and where to locate the portfolio mapping document.

Your portfolio is not assessed. It serves two purposes:

- The independent assessor reviews your portfolio before the technical interview to help focus and contextualise their questions
- You should carefully prepare, index and map your portfolio as this will further support you during your technical interview. Your organised portfolio will allow you with ease to refer to examples and discuss the evidence with the independent assessor

What should I include in my portfolio?

Quality vs quantity

You should be supported in selecting and mapping evidence for your portfolio by your employer or training provider.

We would advise you to choose the best pieces of evidence and map them to each KSB which will be covered during your technical interview. To be confident of meeting the KSB, you should aim to have two/three pieces of evidence mapped to each KSB.

Examples of acceptable evidence:

- that is mapped against the relevant KSBs that will be assessed by the technical interview. A template has been produced which you can use to

collect and map your evidence. A copy of the template is included, see Appendix B 'Portfolio Mapping Document'

- quality pieces selected
- demonstrations of work carried out over a period of time and include evidence of work carried out within the last three months of the on-programme period
- a minimum of 2 and no more than 3 activities accrued out by you that demonstrates the higher order knowledge, skills and behaviours
- where practicable this should include and clearly labelled:
    - photographs
    - images
    - diagrams
    - job descriptions and witness evidence/ testimony
- situations that have been difficult and challenging, and how these have been overcome e.g. equipment breakdown which has results in a change in working practice while still adhering to company procedures
- any employer contributions must focus on direct observation of evidence (e.g. review/witness statements) of competence rather than opinions

The above is not a definitive list. You can include other relevant evidence sources.

You **must not** include in your portfolio any methods of self-assessment.

Evidence must be:

- produced by you (authentic)
- relevant to the standard (K, S or B) that it is mapped to
- produced during the time you were carrying out your on-programme training

What can I do to prepare for the technical interview?

You should:

- be familiar with the structure of your portfolio
- know the KSBs covered by the technical interview
- know where you have mapped your KSBs by referring to your portfolio mapping document
- ensure there is quality evidence to cover every KSB in the technical interview
- practise mapping evidence and completing the evidence mapping grid
- know how you will be graded

The role of your employer or training provider

Employers or training providers are expected to support you in preparing your portfolio by:

- clarifying responsibility for supporting you in selecting and mapping evidence for your portfolio, including the role of employer coaches/mentors where applicable
- advising you on which pieces of evidence you should select to ensure that when it is looked at as a whole, your evidence provides coverage of all the required elements of the standard (KSBs) assessed in the technical interview
- supporting the mapping of your evidence and production of your mapping document
- authenticating evidence you provide is valid
- signing off your portfolio
- submitting your portfolio to EUIAS as part of Gateway

Practice Component 2: Technical Interview based on Portfolio of Evidence

You should have an opportunity to have a practice technical interview which mirrors the real assessment. The practice technical interview based on your portfolio of evidence would be set up using the structure in the table above by your employer or training provider.

Overall grading

Your apprenticeship will be graded distinction, merit, pass or fail. The final grade will be determined by collective performance in the three assessment components.

Grades from individual assessment components will be combined in the following way to determine your overall EPA grade as a whole.

Knowledge Assessment Grade	Practical Observation Grade	Technical Interview Grade	Final Grade
Pass, Merit or Distinction	Pass	Pass	**Pass**
Pass, Merit or Distinction	Pass or Merit	Pass	**Pass**
Pass, Merit or Distinction	Pass	Pass or Merit	**Pass**
Pass, Merit or Distinction	Merit	Merit	**Merit**
Pass, Merit or Distinction	Distinction	Merit	**Merit**
Pass, Merit or Distinction	Merit	Distinction	**Merit**
Pass	Distinction	Distinction	**Merit**
Merit or Distinction	Distinction	Distinction	**Distinction**

Section 4: Resits and retakes

If you fail one or more EPA components you can re-sit or a re-take the failed component at your employer's discretion. Your employer needs to agree that a re-sit or re-take is appropriate. A re-sit does not need further learning, but a re-take does. You should have a supportive action plan to prepare for your re-sit or re-take.

Your employer and EUIAS will agree the timescale for your re-sit or re-take. Failed EPA component(s) must be re-sat or re-taken within the 6 months month end-point assessment period, otherwise the EPA will need to be re-sat or re-taken in full.

Re-sits and re-takes will not be offered to you if you wish to move from pass to a higher grade.

You will get a maximum EPA grade of pass for a re-sit or re-take.

The EUIAS resit and re-take policy can be found at:
https://www.euias.co.uk/end-point-assessment/policies-and-fees/

Section 5: Appendices

Appendix A: Glossary

Appendix B: Portfolio Mapping Document

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 –mindsets, attitudes or approaches needed for competence. Whilst these can be innate or instinctive, they can also be learnt. Behaviours tend to be very transferable. They may be more similar across occupations than knowledge and skills. For example, team worker, adaptable and professional#

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

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

Gateway – the stage of the apprenticeship where the apprentice, employer and trainer determine whether the apprentice is ready to undertake the End-Point Assessment

Independent Assessor – Will holistically assess the knowledge, skills and behaviours (KSBs) that you have been learnt throughout the apprenticeship. Their role as an Independent Assessor would involve assessing components 2 (practical assessment) and 3 (technical interview based on your portfolio of evidence)

Knowledge – the information, technical detail, and 'know-how' that someone needs to have and understand to successfully carry out the duties. Some knowledge will be occupation-specific, whereas some may be more generic

Options / Pathways – a specialist route within an occupational standard that builds on the occupational competence for a new entrant to the occupation

Skills – the practical application of knowledge needed to successfully undertake the duties. They are learnt through on and/or off-the-job training or experience

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. The occupational standards are developed by employers for occupations that meet the Institute for Apprenticeships & Technical Education current criteria. For further details refer to: https://www.instituteforapprenticeships.org/apprenticeship-standards/maintenance-and-operations-engineering-technician-v1-2

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

Appendix B: Portfolio Mapping Document

Introduction

Throughout the on-programme part of the apprenticeship, you will need to compile a portfolio of evidence to support the requirements of the technical interview. The evidence within the portfolio will need to be mapped by you to the KSB requirements using the mapping document below.

The independent assessor will use the mapping document to review the evidence in your portfolio in preparation for the technical interview. The independent assessor will not assess your portfolio.

The portfolio mapping document below consists of the core requirements.

Your next steps

1. Complete all the details on the first page and include employer details of where relevant competencies from your experience at work was gained

2 Ensure each piece of evidence is signed off by your tutor/supervisor/mentor and lead provider (employer or training provider). You can use a number of different types of evidence to demonstrate your competence as described in Section 5 of the Specification – 'What to include in the portfolio?'. For further guidance, you must seek advice from your tutor/supervisor/mentor and lead provider

3 Map evidence to the criteria in the following pages using a referencing system indicating where the evidence for the criteria is located in your portfolio e.g., work based evidence Job 1 (J1) page 5 paragraph 2. This will allow the independent assessor to locate the section or specific piece of evidence being discussed with you during the technical interview

4 Place the portfolio mapping document at the front of the portfolio of evidence

5 Your lead provider must make arrangements for EUIAS to have access to your portfolio including the portfolio mapping document at Gateway

Portfolio Mapping Document

Mapping Sign off on Portfolio Completion:

Place this portfolio mapping document at the front of your portfolio of evidence.

Apprentice Full Name (Print)	Apprentice Signature	Training Provider (Company)	Training Provider Signatory	Date of Sign Off

Core Knowledge

Ref.	Apprenticeship Standard Criteria	PORTFOLIO EVIDENCE REFERENCE (Apprentice Input)		
		1	2	3
K1	First principles relating to operation and maintenance of plant and equipment			
K2	Relevant industry health and safety standards, regulations and environmental and regulatory requirements			
K3	Maintenance and operational practices, processes and procedures			
K4	Relevant engineering theories and principles			
Assessor Comments:				

Core Skills

Ref.	Apprenticeship Standard Criteria	PORTFOLIO EVIDENCE REFERENCE (Apprentice Input)		
		1	2	3
S5	Locate, and rectify faults on plant and equipment			
S6	Read, understand and interpret information and work in compliance with technical specifications and supporting documentation			
S7	Inspect and maintain appropriate plant and equipment to meet operational requirements			
S8	Communicate, handover and confirm that the appropriate engineering process has been completed to specification			
Assessor Comments:				

Core Behaviours

Ref.	Apprenticeship Standard Criteria	PORTFOLIO EVIDENCE REFERENCE (Apprentice Input)		
		1	2	3
B5	Critical reasoning			
Assessor Comments:				

Pathway: Electrical Specific Skills

Ref.	Apprenticeship Standard Criteria	PORTFOLIO EVIDENCE REFERENCE (Apprentice Input)		
		1	2	3
E1	Position, assemble, install and dismantle electrical plant and equipment to agreed specifications			
E2	Carry out planned, unplanned and preventative maintenance on electrical plant and equipment			
E3	Replace, repair and/or remove components in electrical plant and equipment and ensure its return to operational condition			
E4	Diagnose and determine the cause of faults in electrical plant and equipment			
Assessor Comments:				

Pathway Mechanical Specific Skills

Ref.	Apprenticeship Standard Criteria	PORTFOLIO EVIDENCE REFERENCE (Apprentice Input)		
		1	2	3
M1	Position, assemble, install and dismantle mechanical plant and equipment to agreed specifications			
M2	Carry out planned, unplanned and preventative maintenance procedures on mechanical plant and equipment			
M3	Replace, repair and/or remove components in mechanical plant and equipment and ensure its return to operational condition			
M4	Diagnose and determine the cause of faults in mechanical plant and equipment			
Assessor Comments:				

Pathway: Electromechanical Specific Skills

Ref.	Apprenticeship Standard Criteria	PORTFOLIO EVIDENCE REFERENCE (Apprentice Input)		
		1	2	3
EM1	Position, assemble, install and dismantle integrated electromechanical power and control systems			
EM2	Carry out planned, unplanned and preventative maintenance on integrated electromechanical plant and equipment			
EM3	Replace, repair and/or remove components within integrated electromechanical plant and equipment and ensure its return to operational condition			
EM4	Diagnose and determine the cause of faults within integrated electromechanical plant and equipment			
Assessor Comments:				

Pathway Electrical System and Process Control Specific Skills

Ref.	Apprenticeship Standard Criteria	PORTFOLIO EVIDENCE REFERENCE (Apprentice Input)		
		1	2	3
EP1	Position, assemble, install and dismantle integrated electrical apparatus, systems and process control equipment			
EP2	Carry out planned, unplanned and preventative maintenance procedures on integrated plant and equipment			
EP3	Replace, repair and/or remove components within integrated plant and equipment and ensure its return to operational condition			
EP4	Diagnose and determine the cause of faults within integrated plant and equipment			
EP5	Calibrate and configure integrated electrical apparatus, systems and process control equipment			
Assessor Comments:				

Pathway: Control and Instrumentation Specific Skills

Ref.	Apprenticeship Standard Criteria	PORTFOLIO EVIDENCE REFERENCE (Apprentice Input)		
		1	2	3
CI1	Position, assemble, install and dismantle plant and equipment to agreed specifications			
CI2	Carry out planned, unplanned and preventative maintenance on plant and equipment			
CI3	Replace, repair and/or remove components in plant and equipment and ensure its return to operational condition			
CI4	Diagnose and determine the cause of faults in plant and equipment			
CI5	Calibrate and configure instrument and control systems			
Assessor Comments:				

Pathway: Plant Operations Specific Skills

Ref.	Apprenticeship Standard Criteria	PORTFOLIO EVIDENCE REFERENCE (Apprentice Input)		
		1	2	3
PO1	Carry out planned operating procedures on plant and equipment			
PO2	Monitor the performance of the plant and equipment			
PO3	Handover and accept responsibility for plant and equipment			
PO4	Respond to contingencies			

Pathway: Wind Turbine Specific Skills

Ref.	Apprenticeship Standard Criteria	PORTFOLIO EVIDENCE REFERENCE (Apprentice Input)		
		1	2	3
WT1	Install, assemble, commission and dismantle wind turbine plant and equipment, which will include pitch systems, yaw systems, switchgear, control systems to agreed specifications			
WT2	Carry out planned, unplanned and preventative maintenance procedures on wind turbine plant and equipment including mechanical drive systems			
WT3	Replace, repair and/or remove components in wind turbine plant and equipment and ensure its return to operational condition			
WT4	Diagnose and determine the cause of faults in wind turbine plant and equipment			
Assessor Comments:				