



ENERGY &
ENVIRONMENT
AWARDS

Skills for a greener world

EEA Level 3 End-point Assessment for Gas Engineering
Operative

Supporting Documents

QAN 610/6035/5
ST0155 V1.2

Supporting Documents for

EEA Level 3 End-point Assessment for Gas Engineering Operative

QAN 610/6035/5

Updates to the supporting documents.....	3
Appendix A: Glossary.....	4
Appendix B: Gateway Eligibility Form.....	5
Appendix C: Practice Multiple-choice Test.....	9
Appendix D - Level 3 Gas Engineering Operative Practical Assessment with questions Planning Form.....	28
Appendix E: Practice Practical Assessment with questions Template	35
Appendix F: Practice Interview based on a portfolio of evidence Template	43
Appendix G: Portfolio Mapping Document	51

Updates to the supporting documents

Since the first publication of Energy & Environment Awards Gas Engineering Operative (GEO) Supporting Documents, the following updates have been made.

Version	Date first published	Section updated	Page(s)
v2.0	August 2025	Rebranded	All
v1.0	August 2024	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

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

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 Institute for Apprenticeships and Technical Education 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: ST0155 version 1.1)

Apprentice's name:	Apprentice's job title:
Name of Employer:	Name of Training provider:
Employer representatives present:	Training provider representatives present:
Apprenticeship start date:	Apprenticeship on-programme end date:
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:

The apprentice must confirm their achievement of the following:

Note: For apprentices aged 19+, 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 MUST be included)
They are ready to take the EPA		
Achieved English in line with apprenticeship funding rules		
Achieved Maths in line with apprenticeship funding rules		
Achieved IGEM IG/1 supplement 2 certification (Natural Gas) or IGEM IG/1 supplement 4 certification (LPG)		
Matters of Gas Safety Competency Accreditations		
Compiled and submitted a competent portfolio of evidence that meets the specification requirements, on which the interview will be based		

Gateway Eligibility Declaration

1. The apprentice, the employer and the training provider must sign this form to confirm that they understand and agree to the following:
2. The apprentice has completed the required on-programme elements of the apprenticeship and is ready for end-point assessment with Energy & Environment Awards.
3. Energy & Environment Awards has been informed about any reasonable adjustment and/or special considerations requests.
4. The apprentice will only submit their own work as part of end-point assessment.
5. All parties agree that end-point assessment evidence may be recorded and stored by Energy & Environment Awards for quality assurance purposes.
6. The apprentice has been on-programme for a minimum duration of 365 days.
7. The apprentice has confirmed they are ready to take the EPA.
8. The apprentice has achieved English and maths in line with apprenticeship funding rules.
9. The apprentice has achieved IGEN IG/1 supplement 2 certification (Natural Gas) or IGEN IG/1 supplement 4 certification (LPG)
10. The apprentice has achieved Matters of Gas Safety Competency Accreditations
11. The apprentice has compiled and submitted a competent portfolio of evidence, on which the interview will be based.
12. The apprentice, if successful, gives permission for Energy & Environment Awards to request the apprenticeship certificate from the ESFA who issue the certificate on behalf of the Secretary of State.
13. The apprentice has been directed to Energy & Environment Awards Appeals Policy and Complaints Policy.
14. The employer/training provider has given Energy & Environment Awards at least three months' notice of requesting this EPA for this apprentice.
15. 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

Level: 3

Gas Engineering Operative

Supporting Document: Practice Paper

This practice paper reflects the type of questions in the live multiple-choice test, which can be taken as an online test or paper-based test.

This examination consists of 40 multiple-choice questions.

The Pass mark is 28 correct answers.

A mark of 34 or more is a Distinction.

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	
(A) (B) (C) ●	ANSWER COMPLETED CORRECTLY
Examples of how NOT to mark your examination sheet. These will not be recorded	
(A) (B) (C) ◐	DO NOT partially shade the answer circle.
(A) (B) (C) (D) ✕	DO NOT use ticks or crosses.
(A) (B) (C) (D) ○	DO NOT use circles.
(A) (B) ● ●	DO NOT shade over more than one circle.

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

Question 1

The body responsible for enacting the Environment Act 2021 is called:

Possible answers

a)	The Environment Agency
b)	The Environment Commission
c)	The Environment Council
d)	The Environment Executive

Question 2

In 2015, 17 Sustainable Development Goals were created by:

Possible answers

a)	United Kingdom
b)	United States of America
c)	United Nations
d)	European Union

Question 3

Which ONE of the following activities is relevant to the Environment Act 2021?

Possible answers

a)	The use of chemicals to remove corrosion from a radiator
b)	Replacing old company vehicles with new electric-powered vehicles
c)	Separation of waste following the installation of a central heating system
d)	The correct positioning of a flue / chimney terminal

Question 4

What Part of the Building Regulations provide improvements to support environmental protection in relation to air tightness, building energy performance and building services efficiencies?

Possible answers

a)	G
b)	H
c)	L
d)	P

Question 5

The ignition temperature for natural gas is approximately:

Possible answers

a)	404°C
b)	504°C
c)	604°C
d)	704°C

Question 6

When escaping liquified petroleum gas (LPG) comes into contact with human skin, it could cause:

Possible answers

a)	a skin rash
b)	cold burns
c)	skin to peel
d)	mild concussion

Question 7

The type of gas space heater that is fitted within a fireplace opening, has a coal bed and an integral heat exchanger.

What type of effect is this gas fire?

Possible answers

a)	A radiant fuel effect gas fire
b)	An inset live fuel effect gas fire
c)	A room-sealed fuel effect gas fire
d)	A semi-concealed fuel effect gas fire

Question 8

When working on a free-standing gas cooker, in a room with a volume of 20 m³, the gas operative must ensure that:

Possible answers

a)	It is only connected to rigid pipework
b)	It has a method of ensuring stability
c)	It has been installed beneath an extract system
d)	It has 100 cm ² of purpose provided ventilation

Question 9

A positive return air connection fitted to an open-flued warm air heater prevents:

Possible answers

a)	cold air being directed to all of the rooms
b)	dust being circulated around the property
c)	smells distributed from the kitchen or bathroom
d)	the circulation fan from interfering with the burner

Question 10

To ensure the safe operation of a domestic boiler a combustion analyser will be used to measure the ratio of:

Possible answers

- | | |
|----|------------------------------------|
| a) | carbon monoxide and helium |
| b) | carbon monoxide and nitrogen |
| c) | carbon monoxide and hydrogen |
| d) | carbon monoxide and carbon dioxide |

Question 11

Increasing the pressure of gas will increase the speed of the air/gas mixture and can cause what to happen?

Possible answers

- | | |
|----|-----------------|
| a) | Flame reversion |
| b) | Flame lift |
| c) | Flame elevation |
| d) | Flame retention |

Question 12

The cause of a hob burner on a gas cooker burning with a floppy yellow flame could be:

Possible answers

- | | |
|----|----------------------------------------------------------------|
| a) | Blocked primary air port |
| b) | Volume of room or space too high |
| c) | High oxygen content |
| d) | Openable window located further than 300 mm from the appliance |

Question 13

How many atoms make up the chemical formula for methane gas?

Possible answers

a)	1
b)	2
c)	4
d)	5

Question 14

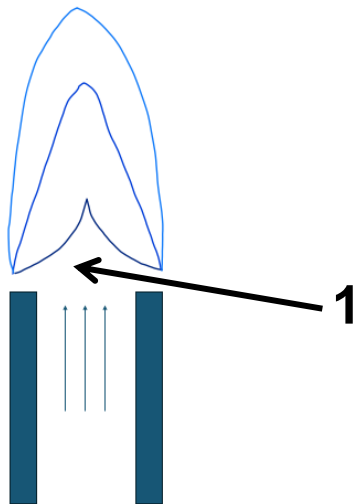
For each cubic metre (m³) of natural gas burned, the amount of air required is:

Possible answers

a)	4.89 m ³
b)	9.75 m ³
c)	23.80 m ³
d)	82.14 m ³

Question 15

The diagram below shows the zones of a pre-aerated flame, what is the name of the zone indicated by number 1?


Possible answers

- | | |
|----|--------------|
| a) | Reaction |
| b) | Unburnt gas |
| c) | Flame front |
| d) | Outer Mantle |

Question 16

When incomplete combustion occurs, a characteristic smell may be noticed, this smell is :

Possible answers

- | | |
|----|-----------------|
| a) | Aldehydes |
| b) | Carbon Monoxide |
| c) | Alcohols |
| d) | Carbon Dioxide |

Question 17

What type of burner has gas which has been **combined** with air by a centrifugal fan which forces the mixture into the burner head?

Possible answers

a)	Pre-mix
b)	Pre-aerated
c)	Post-aerated
d)	Forced-draught

Question 18

What position should doors and windows be in when a spillage test is being carried out?

Possible answers

a)	Doors and windows should be open
b)	Doors and windows should be closed
c)	Doors should be closed, and windows should be left open
d)	Doors should be left open, and windows should be closed

Question 19

When installing a fan-flued boiler, the maximum length of the fan-flue system is:

Possible answers

a)	stated within the Gas Safety Installation & Use Regulations 1998
b)	stated within the Health & Safety at Work Act 1974
c)	stated within the British Standard 5440 – part 2
d)	stated within the manufacturer's instructions

Question 20

The type of flue system which rises from the top of the appliance, takes combustion air from outside and discharges products of combustion outside is called:

Possible answers

- | | |
|----|--------------------------|
| a) | an open flue |
| b) | a closed flue |
| c) | a combination flue |
| d) | a vertical balanced flue |

Question 21

Gas Safety Regulation 26(9) states that where a person performs work on a gas appliance they shall immediately thereafter examine:

Possible answers

- | | |
|----|----------------------------------------|
| a) | the meter reading |
| b) | the heating circuit |
| c) | the effectiveness of the flue |
| d) | the electrical supply to the appliance |

Question 22

A domestic gas oven is installed in a room with an openable window direct to outside. The room has a volume of less than 5m³.

What is the required size for the permanent ventilation?

Possible answers

- | | |
|----|---------------------|
| a) | 35 cm ² |
| b) | 50 cm ² |
| c) | 75 cm ² |
| d) | 100 cm ² |

Question 23

Where a flue passes through a void, which ONE of the following must be provided?

Possible answers

a)	Ventilation throughout its length
b)	A non-flammable lining throughout the void
c)	A carbon monoxide (CO) detector at the outlet
d)	A means to allow a full visual inspection of the installation

Question 24

The standard procedure for reinforcing an open-flued chimney involves the use of specially designed clips.

What is the recommended distance between these clips?

Possible answers

a)	1.0 m and at any change of direction
b)	1.5 m and at any change of direction
c)	1.8 m and at any change of direction
d)	2.0 m and at any change of direction

Question 25

For an open-flued appliance that utilizes combustion ventilation through two or more internal walls, what percentage increase is required for the sizes of the internal vents relating to the external vent?

Possible answers

a)	5%
b)	10%
c)	20%
d)	50%

Question 26

Which ONE of the following situations would be reportable under the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013 (RIDDOR)?

Possible answers

a)	The installation of a room sealed boiler in a kitchen compartment
b)	The installation of a gas hob in a room of volume less than 10m ³
c)	The installation of an open flued boiler in a bathroom
d)	The installation of a gas fire in a through-room

Question 27

Which ONE of the following activities must be carried out when looking for a suspected gas escape at a property connected to a natural gas supply?

Possible answers

a)	Test all flues for safe operation
b)	Apply a tightness test to the installation
c)	Carry out safety checks on all appliances
d)	Test appliances for the presence of carbon monoxide

Question 28

If a member of the public reports a smell of gas in their kitchen, what should the operative instruct them to do?

Possible answers

a)	Turn the gas off at the meter and call Gas Safe Register
b)	Turn the gas off at the meter and call a registered installer
c)	Turn the gas off at the meter and call the gas transporter
d)	Turn the gas off at the meter and call the gas emergency service

Question 29

What is the category of an unsafe situation where during a tightness test, the pressure drop recorded is greater than the permissible pressure drop relative to the meter size?

Possible answers

a)	At Risk
b)	Concern for Safety
c)	Immediately Dangerous
d)	Not to Current Standards

Question 30

Technical Bulletin 102 states that the preferred position for Protective Equipotential Bonding on a low-pressure meter installation in an external meter box is:

Possible answers

a)	within the meter box
b)	before the first fitting
c)	next to the appliance
d)	at the point of entry to the building

Question 31

Following a report of fumes, what type of test can be used to identify possible sources of carbon monoxide (CO) around a suspected room sealed appliance?

Possible answers

a)	Flue flow test
b)	Tightness test
c)	Sweep test
d)	Let-by test

Question 32

What is necessary for smart controls to function properly?

Possible answers

- | | |
|----|---------------------------------------------------|
| a) | A fused spur with a 5-amp fuse fitted |
| b) | A combination boiler installed after 2020 |
| c) | A hub device connected to a local internet router |
| d) | A network of cables connected to a wiring centre |

Question 33

What type of hot water system works by the change in the density of the water as it is heated by the boiler, where heated water rises from the boiler and cooler water falls back to the boiler?

Possible answers

- | | |
|----|-------------|
| a) | Gravity |
| b) | Radiant |
| c) | Circulating |
| d) | Conduction |

Question 34

On a sealed/pressurised system what form of safety device must be fitted to the system to safeguard against the malfunction of the thermostat on the boiler?

Possible answers

- | | |
|----|-------------------------------------|
| a) | Filling loop |
| b) | Expansion Vessel |
| c) | Carbon monoxide alarm |
| d) | Temperature & pressure relief valve |

Question 35

To obtain the maximum efficiency from an Air Source Heat Pump the:

Possible answers

- | | |
|----|---------------------------------------------------------------------------------------|
| a) | unit must be fitted above 2 m from the ground |
| b) | unit must always be positioned in direct sunlight |
| c) | underfloor heating pipework must be fitted at a depth of 500 mm |
| d) | temperature difference between the flow and return temperatures must be set correctly |

Question 36

Before designing a heating system, it is essential to evaluate the required heat supply.

In the process of calculating the heat loss through the building fabric, the operative must multiply the surface area of the building by the temperature differential and what other factor?


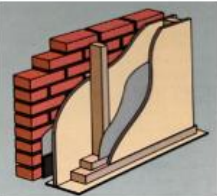
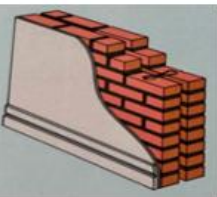
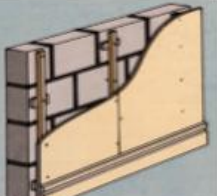
Possible answers

- | | |
|----|-----------------------|
| a) | U-value |
| b) | Heat input |
| c) | Volume of the room |
| d) | Number of air changes |

Question 37

From the images below, determine which image represents a timber-framed cavity wall construction.

Possible answers

a)	
b)	
c)	
d)	

Question 38

In a domestic property, ring circuits that include sockets and fused spur connections will be installed with which of the following:

Possible answers

a)	0.75 mm ² 3 core flex
b)	1.00 mm ² 3 core flex
c)	2.5 mm ² twin core and earth cable
d)	6 mm ² twin core and earth cable

Question 39

Where roof surfaces between neighbouring buildings meet, the gap between them is sealed with what item?

Possible answers

a)	Felt
b)	Fascia
c)	Flashing
d)	Flaunching

Question 40

According to Building Regulations Approved Document G, the type of water supplied to a building by a statutory water undertaker, or a licensed water supplier is described as:

Possible answers

a)	Grey
b)	Black
c)	Harvested
d)	Wholesome

End of Questions.

Practice Multiple-choice Test

Answer scheme

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

Appendix D - Level 3 Gas Engineering Operative Practical Assessment with questions Planning Form

Instructions

This form has two purposes:

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

Practical Assessment with questions

Up to 4 apprentices may be assessed at one time depending on number of EPA bays at the independent assessment centre. Bays will need to be independent, and the apprentice must not have had any exposure to the bay whilst on-programme.

The apprentice is assessed:

- in a simulated environment selected by Energy & Environment Awards for example, employer or training providers premises. The simulated environment must relate to the apprentice's natural work environment
- A total of 12 hours is permitted for the practical assessment with questioning
- Equipment and resources needed for the assessment must be provided by the employer or training provider which must be in good and safe working condition

The activities should be designed to assess a broad range of the skills, knowledge and behaviours developed over the period of the apprenticeship. However, as a minimum the practical assessment with questioning must cover the activities and KSBs listed in the Planning Form below.

Energy & Environment Awards must review the employer/training provider's Practical assessment with questions 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 'Practical Assessment with questions Planning Form' and submit it to the Service Delivery team via enquiries@energyenvironmentawards.co.uk, for **review 1 month before the start** of the end-point assessment.

Practical Assessment with questions Planning Form

Employer name and site address	
Training provider (if applicable)	
Standard	Gas Engineering Operative
Level	3
Location of practical assessment with questions	
Contact Details: Employer/training provider representative, email address and contact number overseeing the setup of the practical (documents and site).	

Table 1

Please confirm by checking the boxes the practical tasks will allow the apprentice(s) to:	
Install three different appliances or pieces of equipment from Table 1 (Primary)	<input type="checkbox"/>
Commission three different appliances or pieces of equipment from Table 1 (Primary)	<input type="checkbox"/>
Decommission three different appliances or pieces of equipment from Table 1 (Primary)	<input type="checkbox"/>
Conduct maintenance <input type="checkbox"/> , servicing <input type="checkbox"/> and fault-finding <input type="checkbox"/> procedures on one appliance or piece of equipment from Table 1 (Primary), including the rectification of a pre-loaded fault.	<input type="checkbox"/>
Confirm tasks for the above have been submitted	<input type="checkbox"/>

Table 1 (Primary) Appliances: Please check the box to confirm the appliances that will be used:	
Central heating and water heating system	<input type="checkbox"/>
Domestic cooker	<input type="checkbox"/>
Gas ranger cooker or boiler	<input type="checkbox"/>
Ducted air heater	<input type="checkbox"/>
Forced draught gas burner	<input type="checkbox"/>
Gas fire & wall heater	<input type="checkbox"/>

LPG single gas storage vessel & service pipework	<input type="checkbox"/>
LPG single & multi supply gas storage vessel and service pipework	<input type="checkbox"/>
Testing & purging of non-domestic pipework.	<input type="checkbox"/>

Table 2

Install one appliance or piece of equipment from Table 2 (Secondary)	<input type="checkbox"/>
Commission one appliance or piece of equipment from Table 2 (Secondary)	<input type="checkbox"/>
Decommission one appliance or piece of equipment from Table 2 (Secondary)	<input type="checkbox"/>
Please confirm by checking the box the apprentice will undertake practical tasks on appliances or equipment that they have attained 'Matters of Gas Safety Compliance Accreditation'	<input type="checkbox"/>
Confirm tasks for the above have been submitted	<input type="checkbox"/>

Table 2 (Secondary) Appliances: Please check the box to confirm the appliances that will be used:

Swimming pool boiler	<input type="checkbox"/>
Domestic tumble dryer	<input type="checkbox"/>
Leisure appliance (for example fixed pipework gaslight or barbeque)	<input type="checkbox"/>
Instantaneous water heater	<input type="checkbox"/>
Gas meter (not exceeding 6m ³ per hour in capacity)	<input type="checkbox"/>
Mobile cabinet heater	<input type="checkbox"/>
Closed flue gas fire	<input type="checkbox"/>
Caravan space heater	<input type="checkbox"/>
Single bottle supply leisure equipment (for example LPG barbeque)	<input type="checkbox"/>
Caravan or boat refrigerator	<input type="checkbox"/>
Caravan or boat warm air heater	<input type="checkbox"/>
Caravan water heater	<input type="checkbox"/>

Electro-fusion jointing of polyethylene pipework and fittings	<input type="checkbox"/>
---------------------------------------------------------------	--------------------------

Please confirm by checking the boxes that the independent assessor should be able to observe the following during the assessment:

Compliance with health and safety legislation and regulators	<input type="checkbox"/>
--------------------------------------------------------------	--------------------------

Use of PPE, safe use of tools and digital equipment	<input type="checkbox"/>
-----------------------------------------------------	--------------------------

Completing documentation	<input type="checkbox"/>
--------------------------	--------------------------

Interpret and follow instruction from technical documentation	<input type="checkbox"/>
---------------------------------------------------------------	--------------------------

Installation, commissioning and decommissioning of appliances or pieces of equipment	<input type="checkbox"/>
--------------------------------------------------------------------------------------	--------------------------

Fault-finding procedures and rectification of a fault	<input type="checkbox"/>
-------------------------------------------------------	--------------------------

Reinstatement of the work area	<input type="checkbox"/>
--------------------------------	--------------------------

Provision of guidance specific to the appliance(s)	<input type="checkbox"/>
----------------------------------------------------	--------------------------

Please confirm by checking the box the activities listed above provide the apprentice with the opportunity to demonstrate the KSBs listed below which must be mapped to this assessment method.	<input type="checkbox"/>
-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------

Use the boxes below to confirm the individual KSBs are covered in the above tasks
for details see reference table on pages: 33 – 34.

Practical Assessment with Questions	
Theme: Health and Safety	Check box to confirm application to task
K2: Gas Industry Unsafe Situations Procedure (IGEM G11)	<input type="checkbox"/>
S15 Identify unsafe situations or conditions and take action under IGEM G/11 Gas industry unsafe situations procedure.	<input type="checkbox"/>
K3 Risk assessments, associated procedures and documentation	<input type="checkbox"/>
S10 Undertake and document risk assessments.	<input type="checkbox"/>
K12 Domestic electrical circuits, safe isolation and electrical safety checks in relation to the work being conducted.	<input type="checkbox"/>
S8 Isolate the electrical supply to the appliance.	<input type="checkbox"/>
S9 Conduct electrical safety checks pre- and post-work.	<input type="checkbox"/>
S1 Comply with health and safety practices.	<input type="checkbox"/>
B1 Prioritise health and safety.	<input type="checkbox"/>
S13 Select and use personal protective equipment (PPE).	<input type="checkbox"/>
Theme: Documentation	Check box to confirm application to task
K19 General Data Protection Regulations (GDPR).	<input type="checkbox"/>
S17 Complete and maintain work records including appliance and customer data in accordance with General Data Protection Regulations (GDPR).	<input type="checkbox"/>
S11 Source, read and follow technical documentation associated with equipment and installation requirements.	<input type="checkbox"/>
S14 Check and action inspection records and schedules.	<input type="checkbox"/>
S16 Use digital technology to access job, appliance and customer information.	<input type="checkbox"/>
Theme: Installation	Check box to confirm application to task
K6 Installation and commissioning practices and techniques applicable to primary gas appliances	<input type="checkbox"/>
S2 Install and commission a range of primary appliances, for example central heating boilers, gas cookers, space heaters.	<input type="checkbox"/>
K7 Installation and commissioning practices and techniques applicable to secondary gas appliances.	<input type="checkbox"/>
S3 Install and commission a range of secondary appliances, for example laundry appliances, water heaters and gas meters (not exceeding 6m ³ in capacity).	<input type="checkbox"/>
K22 Tools, equipment and test instrumentation used in gas engineering activities.	<input type="checkbox"/>
S12 Select, use and maintain tools, equipment and test instrumentation.	<input type="checkbox"/>

Theme: Maintenance, servicing and fault-finding	Check box to confirm application to task
K8 Testing and safety-checking practices applicable to gas appliance types.	<input type="checkbox"/>
S4 Carry out testing and safety checks applicable to the appliance chimney or flue type.	<input type="checkbox"/>
K9 Routine and reactive servicing and maintenance practices and techniques applicable to gas appliances and components.	<input type="checkbox"/>
S5 Carry out routine maintenance and servicing of appliances and components.	<input type="checkbox"/>
B2 Take responsibility for work	<input type="checkbox"/>
K10 Fault-finding, diagnosis and rectification practices and techniques applicable to gas appliances, their controls and associated systems.	<input type="checkbox"/>
S6 Identify and rectify faults in appliances and components.	<input type="checkbox"/>
Theme: Decommissioning	Check box to confirm application to task
K11 Decommissioning practices and techniques applicable to gas appliances and systems.	<input type="checkbox"/>
S7 Decommission appliances and systems.	<input type="checkbox"/>

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: access arrangements/PPE):

Resources (for example: equipment/tools required):

Note: Provision of all equipment and resources are the responsibility of the employer/training provider and must be suitable for the task, in good safe working condition and certification where applicable.

The practical assessment with questioning task(s) must take 12 hours and be completed over 2 consecutive days.

Please state time for the practical task(s): _____

Please state number of days for the practical task(s): _____

Remember:

- The specific detail of the task(s) to be undertaken should be **kept confidential from the apprentices**

Practical Assessment with Questioning Task(s): Include relevant photographs to illustrate task(s)

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Date received	
Date signed off	

Appendix E: Practice Practical Assessment with questions Template

Employers/training providers are recommended to arrange for apprentices to carry out a practice Practical Assessment 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 GEO 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 assessment 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 Practical Assessment with questions.

Quick Tip – How to complete the form below:

Name of Apprentice	
Location(s) of Practice Practical Assessment with Questions	
Name of Independent Assessor	
Date	
Start Time	
End Time	
Independent Assessor: Additional comments	

It is important to ensure that the page illustrated is completed by the assessor.

The assessor should write additional comments to support the preliminary grade decision.

Please indicate the apprentice's practice practical skills observation grade (F/P/D):	Grade

Theme and KSBS: Documentation – K19; S11; S14; S16 and S17			
To achieve a Pass apprentice must demonstrate all of the Pass descriptors	P	To achieve a Distinction apprentice must demonstrate all of the Pass descriptors and all of the distinction descriptors	D
Sources, reads and follows technical documentation associated with equipment and installation requirements to meet the needs of the task. (S11)	<input type="checkbox"/>	NA	NA
Checks and actions inspection reports and schedules, using digital technology to access job, appliance and customer information to complete the task. (S14, S16)	<input type="checkbox"/>		
Completes and maintains work records including appliance and customer data in accordance with General Data Protection Regulations (GDPR). (K19, S17)	<input type="checkbox"/>		
Assessor comments to justify the evidence seen and outcomes achieved:			
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.			
Time of observation			
Fail			<input type="checkbox"/>
Pass			<input type="checkbox"/>

Check the box for each descriptor the apprentice achieves.

Include the time of observation for the descriptors.

Check the relevant box if failed; pass or distinction is achieved.

Provide feedback for the apprentice to show where they could improve their skills.

Summarise the response that the apprentice gave.

Develop some open ended questions in relation to the KSBS.

Include KSB evidence seen that meets the descriptors for the outcomes achieved.

Name of Apprentice	
Location(s) of Practice Practical Assessment with Questions	
Name of Independent Assessor	
Date	
Start Time	
End Time	
Independent Assessor: Additional comments	

Please indicate the apprentice's practice practical skills observation grade (F/P/D):	Grade

Please Note:

Fail: the apprentice does not demonstrate the pass descriptors.

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

To achieve a Distinction an apprentice must successfully achieve **all** the Distinction descriptors and **all** of the Pass descriptors.

Assessor questions: during the live assessment, the assessor must ask at least 3 open questions.

Theme and KSBS: Health and Safety - K1; K2; K3; K12; S1; S8; S9; S10; S13; S15 and B1			
To achieve a Pass apprentice must demonstrate all of the Pass descriptors	P	To achieve a Distinction apprentice must demonstrate all of the Pass descriptors and all of the Distinction descriptors	D
Undertakes and documents risk assessments in line with employer's procedures to prioritise health and safety in the workplace. (K3, S10, B1)	<input type="checkbox"/>	Explains the importance for themselves and the business of working in line with health and safety practices (S1)	<input type="checkbox"/>
Selects and uses personal protective equipment complying with health and safety practices and manufacturer's guidance. (S1, S13)	<input type="checkbox"/>		
Isolates the appliance's electrical supply and conducts electrical safety checks before and after undertaking work tasks in line with safety practices and manufacturer's guidance. (K12, S8, S9)	<input type="checkbox"/>		
Identifies unsafe situations or conditions and takes action in line with the gas industry unsafe situations procedure (IGEM G/11). (K2, S15)	<input type="checkbox"/>		
Assessor comments to justify the evidence seen and outcomes achieved:			
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.			
Time of observation			
Fail			<input type="checkbox"/>
Pass			<input type="checkbox"/>
Distinction			<input type="checkbox"/>

Theme and KSBS: Documentation – K19; S11; S14; S16 and S17			
To achieve a Pass apprentice must demonstrate all of the Pass descriptors	P	To achieve a Distinction apprentice must demonstrate all of the Pass descriptors and all of the Distinction descriptors	D
Sources, reads and follows technical documentation associated with equipment and installation requirements to meet the needs of the task. (S11)	<input type="checkbox"/>	NA	NA
Checks and actions inspection reports and schedules, using digital technology to access job, appliance and customer information to complete the task. (S14, S16)	<input type="checkbox"/>		
Completes and maintains work records including appliance and customer data in accordance with General Data Protection Regulations (GDPR). (K19, S17)	<input type="checkbox"/>		
Assessor comments to justify the evidence seen and outcomes achieved:			
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.			
Time of observation			
Fail			<input type="checkbox"/>
Pass			<input type="checkbox"/>

Theme and KSBS: Installation – K6; K7; K22; S2; S3 and S12			
To achieve a Pass apprentice must demonstrate all of the Pass descriptors	P	To achieve a Distinction apprentice must demonstrate all of the Pass descriptors and all of the Distinction descriptors	D
Installs and commissions primary gas appliances or equipment in line with manufacturer's guidelines. (K6 S2)	<input type="checkbox"/>	Installs and commissions primary and secondary gas appliances or equipment, in line with manufacturer guidelines achieving the outcome right-first-time in line with the task requirements. (K6, K7, S2, S3)	<input type="checkbox"/>
Installs and commissions secondary gas appliances or equipment in line with manufacturer's guidelines. (K7, S3)	<input type="checkbox"/>		
Selects, uses and maintains tools, equipment and test instrumentation to complete the needs of gas engineering tasks. (K22, S12)	<input type="checkbox"/>		
Assessor comments to justify the evidence seen and outcomes achieved:			
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.			
Time of observation			
Fail			<input type="checkbox"/>
Pass			<input type="checkbox"/>
Distinction			<input type="checkbox"/>

Theme and KSBS: Maintenance, service and fault-finding – K8; K9; K10; S4; S5; S6 and B2			
To achieve a Pass apprentice must demonstrate all of the Pass descriptors	P	To achieve a Distinction apprentice must demonstrate all of the Pass descriptors and all of the Distinction descriptors	D
Carries out testing and safety checks to meet the needs of the appliance chimney or flue type. (K8, S4)	<input type="checkbox"/>	Rectifies faults in appliances and components achieving a right-first-time outcome to meet the needs of the task. (K10, S6)	<input type="checkbox"/>
Carries out routine maintenance and servicing of the appliances and components taking responsibility for their own work to meet the needs of the task. (K9, S5, B2)	<input type="checkbox"/>		
Identifies and rectifies faults in appliances and components to meet the needs of the task. (K10, S6)	<input type="checkbox"/>		
Assessor comments to justify the evidence seen and outcomes achieved:			
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.			
Time of observation			
Fail			<input type="checkbox"/>
Pass			<input type="checkbox"/>
Distinction			<input type="checkbox"/>

Theme and KSBS: Decommissioning– K11 and S7			
To achieve a Pass apprentice must demonstrate all of the Pass descriptors	P	To achieve a Distinction apprentice must demonstrate all of the Pass descriptors and all of the Distinction descriptors	D
Decommissions appliances and systems in line with manufacturer guidance and to meet the needs of the task. (K11, S7)	<input type="checkbox"/>	Decommissions an appliance and system in line with manufacturer guidance, achieving the result right-first-time. (K11, S7)	<input type="checkbox"/>
Assessor comments to justify the evidence seen and outcomes achieved:			
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.			
Time of observation			
Fail			<input type="checkbox"/>
Pass			<input type="checkbox"/>
Distinction			<input type="checkbox"/>

Appendix F: Practice Interview based on a portfolio of evidence Template

Employers/training providers are recommended to arrange for apprentices to carry out a practice Interview based on a portfolio of evidence prior to end-point assessment.

Instructions

This should be read in conjunction with the GEO 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 assessment
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 assessment

Quick Tip – How to complete the form below:

Full Name of Apprentice	
Location of Practice Interview based on the portfolio of evidence	
Employer Company Name	
Name of Independent Assessor	
Date	
Start Time	
End Time	
Independent Assessor: Additional Comments	

Please indicate the apprentice's interview provisional grade (F/P/D)	
----------------------------------------------------------------------	--

It is important to ensure that the page illustrated is completed by the assessor.

The assessor should write additional comments to support the provisional grade decision.

Theme and KSBS: Sustainability and health and safety – K1; K18; K24 and S19			
To achieve a Pass apprentice must demonstrate all of the Pass descriptors	P	To achieve a Distinction apprentice must demonstrate all of the Pass descriptors and all of the distinction descriptors	D
Describes how they recycle, reuse and return defective components and disposes of waste to support organisational and regulatory sustainability and energy efficiency practices. (K24, S19)	<input type="checkbox"/>	Describes the importance for the business, their role and the wider gas industry of recycling, reusing and returning defective components and following waste disposal practices. (K24, S19)	<input type="checkbox"/>
Explains the following sustainability and energy efficiency topics and outlines how they impact their role: green technologies, alternative fuels, energy consumption, energy ratings and how they are calculated (K18)	<input type="checkbox"/>		
Explains health and safety practices including manual handling, working at height and working in confined spaces. (K1)	<input type="checkbox"/>		
Assessor comments to justify the evidence seen and outcomes achieved:			
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	<input type="checkbox"/>
		Pass	<input type="checkbox"/>
		Distinction	<input type="checkbox"/>

Check the box for each descriptor the apprentice achieves.

Check the fail or pass 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.

Full Name of Apprentice	
Location of Practice Interview based on the portfolio of evidence	
Employer Company Name	
Name of Independent Assessor	
Date	
Start Time	
End Time	
Independent Assessor: Additional Comments	

Please indicate the apprentice's interview provisional grade (F/P/D)	
----------------------------------------------------------------------	--

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.

Component 3 – Interview based on the portfolio of evidence

Theme and KSBS: Sustainability and health and safety – K1; K18; K24 and S19			
To achieve a Pass apprentice must demonstrate all of the Pass descriptors	P	To achieve a Distinction apprentice must demonstrate all of the Pass descriptors and all of the Distinction descriptors	D
Describes how they recycle, reuse and return defective components and disposes of waste to support organisational and regulatory sustainability and energy efficiency practices. (K24, S19)	<input type="checkbox"/>	Describes the importance for the business, their role and the wider gas industry of recycling, reusing and returning defective components and following waste disposal practices. (K24, S19)	<input type="checkbox"/>
Explains the following sustainability and energy efficiency topics and outlines how they impact their role: green technologies, alternative fuels, energy consumption, energy ratings and how they are calculated (K18)	<input type="checkbox"/>		
Explains health and safety practices including manual handling, working at height and working in confined spaces. (K1)	<input type="checkbox"/>		
Assessor comments to justify the evidence seen and outcomes achieved:			
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 <input type="checkbox"/>
			Pass <input type="checkbox"/>
			Distinction <input type="checkbox"/>

Theme and KSBS: Communication – K23 and S18			
To achieve a Pass apprentice must demonstrate all of the Pass descriptors	P	To achieve a Distinction apprentice must demonstrate all of the Pass descriptors and all of the Distinction descriptors	D
Describes how they communicate verbally with customers to provide guidance on energy and efficiency measures specific to the appliance or system being worked on to meet the needs of the audience. (K23, S18)	<input type="checkbox"/>	Explains the impact on customers and the business of meeting the needs of the audience when providing guidance to customers using verbal communication. (K23, S18)	<input type="checkbox"/>
Assessor comments to justify the evidence seen and outcomes achieved:			
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 <input type="checkbox"/>
			Pass <input type="checkbox"/>
			Distinction <input type="checkbox"/>

Theme and KSBS: – Equality, Diversity and Inclusion (EDI) K20; S21 and B4			
To achieve a Pass apprentice must demonstrate all of the Pass descriptors	P	To achieve a Distinction apprentice must demonstrate all of the Pass descriptors and all of the distinction descriptors	D
Describes how they apply procedures and support an equitable, diverse and inclusive culture and explains how this impacts their work. (K20, S21, B4)	<input type="checkbox"/>	Explains the importance to the business of applying equity, diversity and inclusion procedures. (K20, S21)	<input type="checkbox"/>
Assessor comments to justify the evidence seen and outcomes achieved:			
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 <input type="checkbox"/>
			Pass <input type="checkbox"/>
			Distinction <input type="checkbox"/>

Theme and KSBS: – Mental health K21			
To achieve a Pass apprentice must demonstrate all of the Pass descriptors	P	To achieve a Distinction apprentice must demonstrate all of the Pass descriptors and all of the distinction descriptors	D
Describes common issues, symptoms and warning signs of stress, anxiety and depression, and explains where to go for help and the resources available in their workplace. (K21)	<input type="checkbox"/>	NA	NA
Assessor comments to justify the evidence seen and outcomes achieved:			
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 <input type="checkbox"/>
			Pass <input type="checkbox"/>

Theme and KSBS: Continuous Professional Development (CPD) - S20 and B3			
To achieve a Pass apprentice must demonstrate all of the Pass descriptors	P	To achieve a Distinction apprentice must demonstrate all of the Pass descriptors and all of the distinction descriptors	D
Explains how they carry out and record planned and unplanned learning and development activities in line with organisational CPD requirements. (S20, B3)	<input type="checkbox"/>	NA	NA
Assessor comments to justify the evidence seen and outcomes achieved:			
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 <input type="checkbox"/>
			Pass <input type="checkbox"/>

Appendix G: Portfolio Mapping Document

Portfolio Mapping Document

This document must be placed at the front of the portfolio and submitted to Energy & Environment Awards with the portfolio of evidence.

Introduction

Use this document to map the portfolio of evidence to the KSBs assessed during the professional discussion.

Apprentice's next steps

1. Complete all the details on the first page and include employer details of where relevant competencies from their experience at work was gained.
2. The apprentice can use a number of different types of evidence to demonstrate their competence as described in Section 5 of the Specification – 'What to include in the portfolio?'. For further guidance, the apprentice must seek advice from their tutor/supervisor/mentor and training 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 the 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 and referred to during the professional discussion.
4. Place the portfolio mapping document at the front of the portfolio of evidence.

The apprentice's training provider must make arrangements for Energy & Environment Awards to have access to the apprentice's portfolio including the portfolio mapping document at least 2 weeks before the professional discussion. For apprentices using e-portfolios such as ONEFILE, SMARTASSESSOR, the reference used must simply be the file or folder name you used when uploading the evidence to such systems.

Portfolio Mapping Document

1.1 Mapping Sign off on Portfolio Completion:

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

Sustainability and health and safety Core Knowledge and Skills:

Ref. (KSB)	Apprenticeship Standard Criteria	Portfolio EVIDENCE REFERENCE (Apprentice Input)		
		1	2	3
K1	Health and safety practices including manual handling, working at height and working in confined spaces.			
K18	Sustainability and energy efficiency: green technologies, alternative fuels, energy consumption, energy ratings and how they are calculated.			
K24	Principles of recycling, reusing and returning defective components and disposal of waste.			
S19	Recycle, reuse, return defective components and dispose of waste.			

Communication Core Knowledge and Skills:

Ref. (KSB)	Apprenticeship Standard Criteria	Portfolio EVIDENCE REFERENCE (Apprentice Input)		
		1	2	3
K23	Verbal communication techniques. Giving and receiving information. Matching style to audience. Barriers in communication and how to overcome them. Industry terminology.			
S18	Communicate verbally with customers, including the provision of guidance on energy and efficiency measures specific to the appliance or system being worked on.			

Equality, Diversity and Inclusion (EDI) Core Knowledge, Skills and Behaviours:

Ref. (KSB)	Apprenticeship Standard Criteria	Portfolio EVIDENCE REFERENCE (Apprentice Input)		
		1	2	3
K20	Principles of equity, diversity and inclusion in the workplace and the impact on their work.			
S21	Apply equity, diversity and inclusion procedures.			
B4	Support an equitable, diverse and inclusive culture.			

Mental Health Core Knowledge:

Ref. (KSB)	Apprenticeship Standard Criteria	Portfolio EVIDENCE REFERENCE (Apprentice Input)		
		1	2	3
K21	Common issues, symptoms and warning signs of stress, anxiety and depression, including where to go for help and the resources available.			

Continued Professional Development (CPD) Core Skills and Behaviours:

Ref. (KSB)	Apprenticeship Standard Criteria	Portfolio EVIDENCE REFERENCE (Apprentice Input)		
		1	2	3
S20	Carry out and record planned and unplanned learning and development activities.			
B3	Committed to continued professional development (CPD) to maintain and enhance competence in own area of practice.			

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