

Gas Engineering Operative

Practice Knowledge Assessment – Paper A

Forename (s)	
Surname (s)	
Date	

Duration: 60 minutes

Instructions

- Use black or blue ink or black ball-point pen
- Fill in the boxes at the top of this page
- There are 40 questions, you should attempt all of them
- Mark your answer with an - if you wish to change your answer please put a line through and re-select with another
- Only one answer per question allowed

Sample:

London is the capital of....

Example Question		
London is the capital of...		
Possible answers		Answer
a)	Wales	X
b)	Scotland	
c)	Northern Ireland	
d)	England	X

Advice

- Do not spend too long on one question
- Read all questions thoroughly before starting your examination
- Mobile phones and watches must not be taken into the examination room. The examination must be conducted under examination conditions
- Cheating: you will be asked to leave the examination room and will be classified an automatic fail and referred to your employer

Do not turn over the page until the invigilator instructs you to.

Question 01

In a workplace who is responsible for maintaining health and safety?

Possible answers		Answer
a)	The Health and Safety Executive	
b)	Everyone	
c)	Everyone except contractors	
d)	The employer	

Question 02

Which of the following regulations specifically places a responsibility on organisations for reporting safety related incidents?

Possible answers		Answer
a)	Provision and Use of Working Equipment Regulations	
b)	Gas Safety Management Regulations	
c)	RIDDOR	
d)	Gas Safety Regulations	

Question 03

Under the Health & Safety at Work Act (1974) the employee has a duty to:

Possible answers		Answer
a)	Read notice boards or bulletins	
b)	Complete jobs to time and price	
c)	Ignore information from supervisors and management	
d)	Maintain a safe working environment	

Question 04

Where a load is too heavy for you to move on your own. What should you do?

Possible answers		Answer
a)	Try to lift it using the correct methods	
b)	Although not trained, use a forklift truck	
c)	Ask the customer to help you	
d)	Do not move the load	

Question 05

When removing an asbestos gasket, what is the minimum specification of the dust mask being used?

Possible answers		Answer
a)	FFP1	
b)	FFP2	
c)	FFP3	
d)	FFP4	

Question 06

Which of the following outlines the scope of IGE/UP/1b?

Possible answers		Answer
a)	Pressure at primary meter outlet ≤ 21 mbar, Pipework diameter ≤ 35 mm, meter capacity $6\text{m}^3/\text{hr}$	
b)	Pressure at primary meter outlet ≤ 75 mbar, Pipework diameter ≤ 35 mm, meter capacity $\leq 16\text{m}^3/\text{hr}$	
c)	Pressure at primary meter outlet ≤ 21 mbar, Pipework diameter ≤ 28 mm, meter capacity $\leq 16\text{m}^3/\text{hr}$	
d)	Pressure at primary meter outlet ≤ 21 mbar, Pipework diameter ≤ 35 mm, meter capacity $\leq 16\text{m}^3/\text{hr}$	

Question 07

When tightness testing an installation, why must the drop down lid of a cooker be raised to open?

Possible answers		Answer
a)	To ensure the SSOV is in the open position	
b)	To ensure the SSOV is closed	
c)	To ensure the SSOV has operated	
d)	To prepare for purging	

Question 08

Which of the following locations would require gas pipework to be identified as such?

Possible answers		Answer
a)	Domestic premises	
b)	Commercial premises	
c)	Both domestic and commercial premises	
d)	Any premises where people sleep	

Question 09

When checking the operating pressure at a property what should be used to do this?

Possible answers		Answer
a)	Three rings on a cooker hotplate	
b)	Four rings on a cooker hotplate	
c)	The largest gas burning appliance	
d)	All appliances must be operating	

Question 10

When using a "U" gauge, one limb is reading 20mbar and the other is reading 16mbar, what is the actual pressure reading?

Possible answers		Answer
a)	17mbar	
b)	18mbar	
c)	19mbar	
d)	20mbar	

Question 11

Before connecting a gas appliance to the electrical supply via a 13amp plug, what should be used to ensure the properties wiring is correct?

Possible answers		Answer
a)	A lamp tester	
b)	A Martindale	
c)	A socket tester	
d)	A multi-meter	

Question 12

BS7671 covers the wiring regulations, what is the latest IET edition of this?

Possible answers		Answer
a)	16 th Edition	
b)	17 th Edition	
c)	18 th Edition	
d)	19 th Edition	

Question 13

What is the maximum distance an earth bond can be positioned away from the outlet of a domestic gas meter?

Possible answers		Answer
a)	300mm	
b)	600mm	
c)	900mm	
d)	1200mm	

Question 14

Who shall a person be registered with in order to perform work on domestic gas installations?

Possible answers		Answer
a)	CORGI	
b)	Gas safety	
c)	Gas safe	
d)	The Health and Safety executive	

Question 15

Gas Appliances and meters are specifically covered under which regulation?

Possible answers		Answer
a)	Gas Safety Regulations	
b)	Pipeline Safety Regulations	
c)	Gas Safety (Management) Regulations	
d)	Gas Safety (Installation and Use) Regulations	

Question 16

What is the product of incomplete combustion that may lead to serious illness or death?

Possible answers		Answer
a)	Carbon Dioxide	
b)	Carbon Trioxide	
c)	Carbon Onoxide	
d)	Carbon Monoxide	

Question 17

For every 1m³ of Natural Gas burned, approximately how much air would need to be supplied for complete combustion?

Possible answers		Answer
a)	2m ³	
b)	10m ³	
c)	5m ³	
d)	20m ³	

Question 18

Deposits of what material could indicate incomplete combustion on an appliance?

Possible answers		Answer
a)	Soot	
b)	Rust	
c)	Dust	
d)	Water	

Question 19

Which of the following is the chemical equation for the complete combustion of natural gas?

Possible answers		Answer
a)	$\text{CH}_4 + \text{O}_2 = \text{CO}_2 + 2\text{H}_2\text{O}$	
b)	$\text{CH}_4 + \text{O}_2 = \text{CO}_2 + \text{H}_2\text{O}$	
c)	$2\text{CH}_4 + \text{O}_2 = \text{CO}_2 + 2\text{H}_2\text{O}$	
d)	$\text{CH}_4 + 2\text{O}_2 = \text{CO}_2 + 2\text{H}_2\text{O}$	

Question 20

A ventilator for an open flued boiler has a free area of 35cm^2

What is the maximum net heat input of the boiler for this amount of ventilation?

Possible answers		Answer
a)	7kW	
b)	10kW	
c)	14kW	
d)	16kW	

Question 21

When ventilation passes through a cavity wall what must it contain?

Possible answers		Answer
a)	A fly screen	
b)	Baffles to prevent draughts	
c)	A closable grille	
d)	An uninterrupted duct	

Question 22

Where a flue-less appliance is fitted in a room, what must the room contain?

Possible answers		Answer
a)	An openable window or door to outside	
b)	An extractor fan or cooker hood	
c)	A ventilator of cross sectional area 100cm ²	
d)	An approved CO alarm	

Question 23

Where a flue is fitted in a void what shall be provided?

Possible answers		Answer
a)	Inspection hatches every 3 metres	
b)	One inspection hatch minimum 300mm x 300mm	
c)	Ventilation and a CO detector	
d)	A means for full visual inspection of the flue	

Question 24

Which of the following is not covered under the gas (Installation and Use) regulations?

Possible answers		Answer
a)	Hired portable heaters	
b)	Portable or mobile appliances	
c)	Natural gas meter	
d)	Fixed gas appliances	

Question 25

The gas safety regulations regulation 3 states that no person shall carry out any work in relation to a gas fitting or gas storage vessel unless they are what?

Possible answers		Answer
a)	Over 18 years of age	
b)	Competent	
c)	Working for a company registered with Gas Safe Register	
d)	ACS certificated	

Question 26

Where work has been carried out on a gas appliance, which of the following checks in accordance with regulation 26/9 of the gas installation and use regulations must be carried out immediately after the work?

Possible answers		Answer
a)	Tightness test the whole installation	
b)	A visual inspection of the pipework installation	
c)	Check the flame picture	
d)	Check its operation so as to ensure its safe functioning	

Question 27

A gas appliance installed in a bathroom must be:

Possible answers		Answer
a)	Room sealed	
b)	Open flued	
c)	Fan flued	
d)	Serviced regularly	

Question 28

Which of the following would be deemed an at risk situation?

Possible answers		Answer
a)	Spillage of products of combustion	
b)	Cooker without a safety chain	
c)	Gas fire fitted on a carpet with signs of scorching	
d)	Balanced flue appliance with no terminal guard	

Question 29

Which of the following would be deemed an immediately dangerous situation?

Possible answers		Answer
a)	Spillage of products of combustion	
b)	Cooker without a safety chain	
c)	Gas fire fitted on a carpet with signs of scorching	
d)	Balanced flue appliance with no terminal guard	

Question 30

Where an immediately dangerous situation is encountered what must the Gas Safe registered person do?

Possible answers		Answer
a)	Disconnect the appliance and label it	
b)	Turn off the appliance and apply a warning label	
c)	Turn off the appliance, and attach a danger do not use warning label	
d)	Disconnect and seal and attach a danger do not use warning label	

Question 31

Which of the following is **NOT** a classification used under the gas industry unsafe situations procedures?

Possible answers		Answer
a)	At Risk	
b)	Not to Current Standards	
c)	Immediately dangerous	
d)	AR turning off the supply will not remove the risk	

Question 32

When visually inspecting gas appliances which of the following should be included, this is where the gas supply has been interrupted following a pipework alteration?

Possible answers		Answer
a)	The working pressure of each appliance is recorded	
b)	All flame supervision devices are tested to ensure they shut off and seal	
c)	All consumer appliance controls are checked for safe and correct operation	
d)	The correct operation of any Atmospheric Sensing Device is confirmed	

Question 33

This is a self sealing valve which is operated when a hose connection is inserted in to it. What is it called?

Possible answers		Answer
a)	Ball valve	
b)	Restrictor valve	
c)	A fire pedestal elbow	
d)	Cooker bayonet or micropoint	

Question 34

This control is electrically operated and when energised allows the gas to flow. They can be fitted on supply pipes to appliances or are integral to the gas appliance. What is it?

Possible answers		Answer
a)	A Solenoid valve	
b)	A safety shut off valve	
c)	Thermostat	
d)	Gas tap or cooker tap	

Question 35

What is the maximum operating time for a thermo-electric flame supervision device on a cooker hotplate?

Possible answers		Answer
a)	50 seconds	
b)	60 seconds	
c)	90 seconds	
d)	120 seconds	

Question 36

This control is connected to a flame supervision device and is used to generate a small electrical current when heated by a flame. What is it?

Possible answers		Answer
a)	Atmosphere sensing device	
b)	Thermo electric valve	
c)	Thermocouple	
d)	Vapour pressure valve	

Question 37

This appliance uses a secondary heat exchanger to recover energy from the latent heat contained within the products of combustion. What is this type of appliance called?

Possible answers		Answer
a)	Combination Boiler	
b)	Condensing Boiler	
c)	System Boiler	
d)	Compensating boiler	

Question 38

What is the minimum distance a LPG tank should be installed from a property without a fire wall?

Possible answers		Answer
a)	1.5 metres	
b)	2.0 metres	
c)	2.5 metres	
d)	3.0 metres	

Question 39

Which of the following with regard to the installation and siting of Propane cylinders is correct?

Possible answers		Answer
a)	Must be sited a minimum of 500mm from an openable window	
b)	They cannot be sited inside the property	
c)	Where sited, they must have at least 15 minutes fire resistance	
d)	They should be a 1 metre away from drain, gully or cellar openings	

Question 40

On an LPG system, this device may be re-set by the gas user if it trips out and shuts off the gas supply, what is it called?

Possible answers		Answer
a)	PRV	
b)	ECV	
c)	OPSO	
d)	UPSO	

End of Practice Knowledge Assessment - Answer scheme

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