MOET Practice Assessment

Please write clearly in block capitals below	
Company Name	
Forename (s)	
Surname (s)	
Date of Birth	
Apprentice Number	
Apprentice signature	
Date of Knowledge Test	

Level: 3
Standard: Maintenance and Operations Engineering Technician
Pathway: Electromechanical Practice Assessment
Duration: 45 minutes

Materials

For this paper you must have:

- Pens
- Calculators and reference documents are not required

Instructions

- Use black or blue ink or black ball-point pen
- Fill in the boxes at the top of this page
- Answer **all** questions
- There are questions, possible answers as well as a column for you to mark your answer

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- Mark your answer with an ☒ against the possible answer you think is correct- if you wish to change your answer please put a line through ~~☒~~ and re-select with another ☒
- Only one answer per question allowed. Answers which do not follow the rules of selection will be disallowed. This may impact on the grade awarded
- Do all rough work in this answer book, spare paper is provided in this answer booklet and can be used but **MUST NOT** be removed
- Additional spare paper will not be provided
- All questions are closed book

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**

Information

- There are 30 questions in total
- All questions should be attempted

Advice

- You are not permitted to leave the examination room for the duration of the assessment
- 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 i.e. you

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may not speak to other candidates, if you have a problem raise your hand and the invigilator will attend

- 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 or commence the knowledge test until the invigilator instructs you to

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DO NOT DETACH

Spare paper for to use for calculations or working out

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(A) First principles relating to the operation and maintenance of appropriate plant and equipment (7 Questions)

Question 01			
On what type of installation would you fit this design of washer?			
Possible answers		**Answer**	
a)	High corrosion		
b)	High temperature		
c)	High vibration		
d)	High pressure		

Question 02		
The maximum and/or minimum values that are permitted for specific maintenance operations are commonly described as:		
Possible answers		**Answer**
a)	Factors of safety	
b)	Rules of thumb	
c)	Margins	
d)	Tolerances	

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Question 03		
Which statement is correct? Safety critical equipment should be maintained ….		
Possible answers		**Answer**
a)	safety critical equipment does not need testing	
b)	more frequently that non safety critical equipment	
c)	less frequently that non safety critical equipment	
d)	at the same period as safety non-critical equipment	

Question 04		
Which statement best describes what is meant by the terminology “specification”?		
Possible answers		**Answer**
a)	The capacity to endure continuous force	
b)	The standard when measured against another object of similar design	
c)	Detailed description of the design and materials of an object	
d)	The specified point beyond which certification is invalid	

Question 05		
What type of maintenance is applied when something stops working?		
Possible answers		**Answer**
a)	Planned	
b)	Preventative	
c)	Corrective	
d)	Shutdown	

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Question 06		
What do the initials IP followed by 2 numbers refer to when seen on a piece of equipment:		
Possible answers		**Answer**
a)	Internal pressure	
b)	Integrity protection	
c)	Ingress protection	
d)	Increased pressure	

Question 07		
Which of the following is commonly classed as safety critical?		
Possible answers		**Answer**
a)	Control valve	
b)	Fuse	
c)	Steam trap	
d)	Drain valve	

Question 08		
What does the coloured tag on a piece of rigging equipment mean?		
Possible answers		**Answer**
a)	Certification period	
b)	Safe working load	
c)	Maximum working load	
d)	Safe to use	

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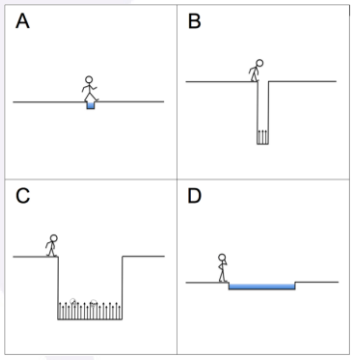
Question 09		
When seen on site, what does a green safety sign signify?		
Possible answers		**Answer**
a)	Mandatory	
b)	Prohibited	
c)	Information	
d)	Warning	

Question 10		
What document should be fixed to a scaffold before you use it?		
Possible answers		**Answer**
a)	Risk assessment	
b)	Safety certificate	
c)	Approved Scafftag	
d)	Permit to work	

Question 11			
Looking at the image provided and taking into consideration risk, which task would you say is low probability and low in impact?			
Possible answers		**Answer**	
a)	A		
b)	B		
c)	C		
d)	D		



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Question 12		
When personal protection equipment is identified on the work control document, which of the following statements is correct?		
Possible answers		**Answer**
a)	PPE is recommended	
b)	PPE is advised	
c)	PPE is good practice	
d)	PPE is mandatory	

Question 13		
In accordance with HSE regulations, how would you know if a substance was regarded as hazardous?		
Possible answers		**Answer**
a)	The container will be coloured red	
b)	It will be contained in a glass receptacle	
c)	It will have a label identifying the hazard	
d)	It will give off a strong odour	

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Question 14		
According to the Confined Space Regulations 1997, which of the following locations is not regarded as a confined space?		
Possible answers		**Answer**
a)	Storage tank	
b)	Termination cabinet	
c)	Floor void	
d)	Pipe trench	

Question 15		
In accordance with HSE guidelines, isolations can only be applied by ….		
Possible answers		**Answer**
a)	Lead technicians	
b)	Training and authorised people	
c)	skilled people	
d)	experienced people	

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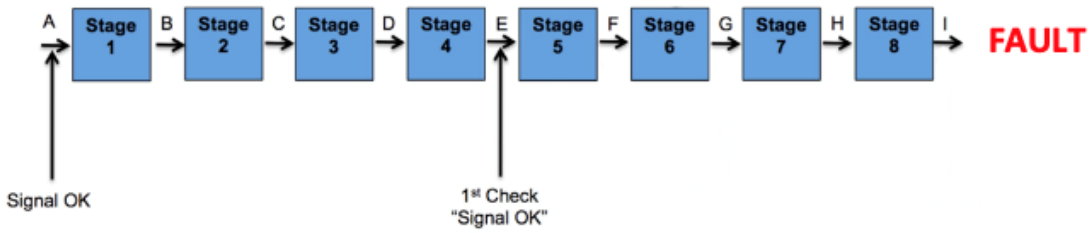
Question 16		
Which of the following manual handling statements is true?		
Possible answers		**Answer**
a)	Correct manual handling prevents all accidents	
b)	Correct manual handling prevents damage to equipment	
c)	Correct manual handling reduces the risk of human injury	
d)	Correct manual handling should only be applied in the workplace	

(C) Maintenance and operational practices, processes and procedures covering a range of plant and equipment (5 Questions)

Question 17		
Using the half split principal and referring to the information provided in the image, at which position should you logically make the next check when fault finding?		
		
Possible answers		**Answer**
a)	Point C	
b)	Point F	
c)	Point G	
d)	Point I	

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Question 18		
What regulation provides guidance on the use of handheld tools?		
Possible answers		**Answer**
a)	PUWER	
b)	COMAH	
c)	LOLER	
d)	COSHH	

Question 19		
What is being measured in this image?		
		
Possible answers		**Answer**
a)	Temperature	
b)	Vibration	
c)	Pressure	
d)	Speed	

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Question 20		
When seen on a British Standard convention drawing, what does this symbol represent?		
		
Possible answers		**Answer**
a)	Electrical signal	
b)	Pneumatic line	
c)	Hydraulic line	
d)	Instrument signal	

Question 21		
What type of maintenance can be applied to check the long-term performance of equipment to identify problems before they occur?		
Possible answers		**Answer**
a)	Preventative maintenance	
b)	Risk based maintenance	
c)	Condition based maintenance	
d)	Corrective maintenance	

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(D) The relevant engineering theories and principles relative to their occupation (9 Questions)

Question 22		
Which of the following is a **primary** unit in the SI system?		
Possible answers		**Answer**
a)	Force	
b)	Length	
c)	Power	
d)	Conductivity	

Question 23		
Which method or methods of heat transfer can occur in a vacuum?		
Possible answers		**Answer**
a)	Radiation	
b)	Convection and radiation	
c)	Convection and conduction	
d)	Conduction	

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Question 24		
How do you calculate resultant force?		
Possible answers		**Answer**
a)	By averaging the forces that act upon on average	
b)	By adding together all the forces that act upon an object	
c)	By dividing the forces that act upon an object	
d)	By multiplying all the forces that act upon an object	

Question 25		
An electric drive motor on a conveyor belt is connected to a 110 V electrical supply. The power of the motor is 2.0kW. The most suitable fuse for the drive motor circuit is:		
Possible answers		**Answer**
a)	5 A	
b)	13 A	
c)	20 A	
d)	55 A	

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Question 26		
The purpose of a commutator on an electric motor is to:		
Possible answers		**Answer**
a)	Ensure easy brush replacement	
b)	Increase the resistance in the motor	
c)	Increase the current in the motor	
d)	Periodically reverse the current direction between the rotor and the external circuit	

Question 27		
The formula for calculating the kinetic energy of an object of mass **m** moving at a velocity of **v** is:		
Possible answers		**Answer**
a)	2 x m x v	
b)	$0.5 \times m \times v^2$	
c)	$2 \times m \times v^2$	
d)	$0.5 \times m^2 \times v$	

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Question 28		
A vehicle is moving at a constant velocity on a horizontal road. Which of the following is true?		
Possible answers		**Answer**
a)	The friction force is almost zero	
b)	The friction force is the same size as the driving force	
c)	The friction force is exactly zero	
d)	The friction force is less than the driving force	

Question 29		
A 20 mA current is flowing through a component of resistance 100 ohms. The voltage difference across the component is:		
Possible answers		**Answer**
a)	5 V	
b)	2 kV	
c)	5 mV	
d)	2 V	

Question 30		
The unit of electromotive force (EMF) is:		
Possible answers		**Answer**
a)	Newton	
b)	Joule	
c)	Amp	

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d)	Volt	

End of Practice Assessment

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Answers

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

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