

Question and Answer Sheet

MOET – Plant Operation Technician Practice Paper

Time Allowed: 45 minutes

Company:

First Name:

Surname:

Date of birth:

Candidate No:

You will need: a pen, a scientific calculator is permitted, any additional tables or diagrams will be provided by the EUIAS.

Mobile phones and watches must not be taken into the examination room. The examination must be conducted under examination conditions i.e. you may not speak to other candidates, if you have a problem raise your hand and the invigilator will attend.

You are not permitted to leave the examination room for the first 15 minutes and the last 15 minutes of the examination.

Cheating: you will be asked to leave the examination room and will be classified an automatic fail and referred to your employer.

Instructions:

You will see that there are questions, possible answers as well as a column for you to mark your answer. Please put an **X** against the possible answer you think is correct.

If you wish to change your answer, please put a line through the **X** and re-select.

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.

Please turn over to see an example.


Sample:

London is the capital of....

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

Do not commence the knowledge test until the invigilator tells you to.

(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 what? | | |
| Possible answers | Answer | |
| a) Factors of safety | | |
| b) Rules of thumb | | |
| c) Margins | | |
| d) Tolerances | | |

| 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 | |

| Question 06 | | |
|--|----------------------|--------|
| When seen a piece of equipment what do the initials IP followed by 2 numbers refer to? | | |
| 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 | |

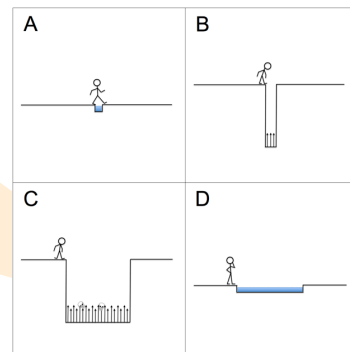
(B) Relevant industry health and safety standards, regulations, and environmental and regulatory requirements (9 Questions)

| 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 | |

| 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 | X |
| b) | B | |
| c) | C | |
| d) | D | |



| 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 | |

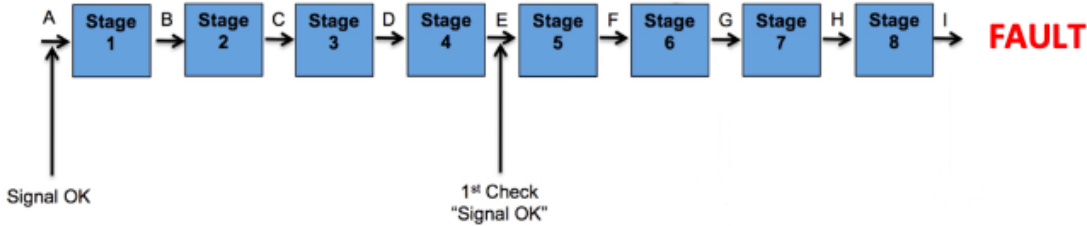
| Question 13 | | |
|--|---|--------|
| In accordance with HSE regulations, how would you know if a substance was regarded as hazardous? | | |
| Possible answers | | Answer |
| a) | The container will be coloured red | |
| b) | It will be contained in a glass receptacle | |
| c) | It will have a label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

| 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 | |

| 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? | | |
|  <pre> graph LR A --> S1[Stage 1] S1 -- B --> S2[Stage 2] S2 -- C --> S3[Stage 3] S3 -- D --> S4[Stage 4] S4 -- E --> S5[Stage 5] S5 -- F --> S6[Stage 6] S6 -- G --> S7[Stage 7] S7 -- H --> S8[Stage 8] S8 -- I --> FAULT[FAULT] </pre> | | |
| Possible answers | | Answer |
| a) | Point C | |
| b) | Point F | |
| c) | Point G | |
| d) | Point I | |

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 | |

| 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 | |

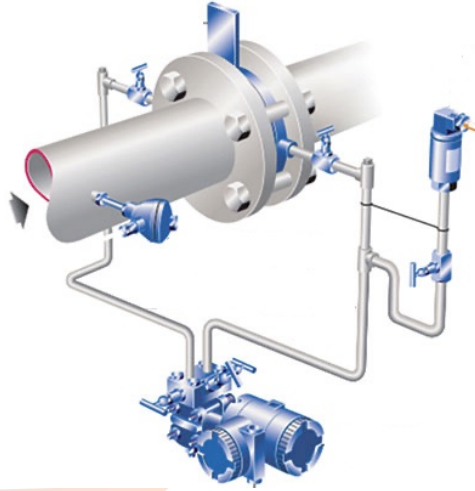
| Question 21 | | |
|---|-----------------------------|--------|
| What type of maintenance can be applied to check the long-term performance of equipment to identify problems before they occur? | | |
| Possible answers | | Answer |
| a) | Preventative maintenance | |
| b) | Risk based maintenance |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

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

| Question 22 | | |
|---|----------------------|--------|
| What service does this device apply to process fluids? | | |
|  | | |
| Possible answers | | Answer |
| a) | Pressure drop | |
| b) | Filtration | |
| c) | Temperature exchange | |
| d) | Mixing | |

Question 23

What operating principal does this instrument use to measure the rate of flow?


Possible answers
Answer

- | | | |
|----|-----------------------|--|
| a) | Differential pressure | |
| b) | Speed of flight | |
| c) | Venturi effect | |
| d) | Bourdon tube | |

Question 24

The terminology LO/LC is often used when applying which set of procedures?

Possible answers
Answer

- | | | |
|----|------------------|--|
| a) | Inhibit/override | |
| b) | Isolation | |
| c) | Risk assessment | |
| d) | Manual handling | |

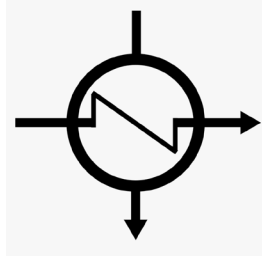


| Question 25 | | |
|--|--|--------|
| What effect does an NRV have when located in a process pipeline? | | |
| Possible answers | | Answer |
| a) | Releases pressure at a given set point | |
| b) | Acts as a self-regulating pressure control valve | |
| c) | Restricts flow to one direction only | |
| d) | Aerates the fluid flowing through the pipework | |

| Question 26 | | |
|---|--|--------|
| Which of the following statements best defines the terminology "viscosity"? | | |
| Possible answers | | Answer |
| a) | The degree of compactness of a substance | |
| b) | A substance that has no fixed shape | |
| c) | The state of being thick in consistency | |
| d) | Firm and stable in shape | |

Question 27

When seen on a piping and instrument drawing when does this symbol represent?


Possible answers
Answer

| | | |
|----|-----------------------|--|
| a) | Electric heater | |
| b) | Heat exchanger | |
| c) | Check valve | |
| d) | Pressure safety valve | |

Question 28

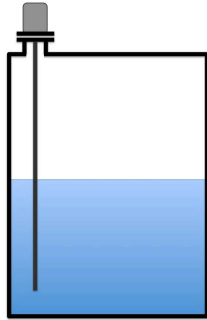
If fluid A had a higher specific gravity than fluid B and they were both contained in the same environment, which statement is true?

Possible answers
Answer

| | | |
|----|--|--|
| a) | Both liquids would mix together | |
| b) | Fluid B would gravitate to below fluid A | |
| c) | Fluid A would gravitate to below fluid B | |
| d) | An explosive atmosphere would be created | |

Question 29

What operating principal does this instrument use to measure the level in the vessel?

| Possible answers | | Answer |  |
|------------------|-----------------------|--------|---|
| a) | Differential pressure | | |
| b) | Ultrasound | | |
| c) | Radio waves | | |
| d) | Capacitance | | |

Question 30

A pump is showing symptoms of higher than normal levels of both noise and vibration. What would commonly be the cause of this condition?

| Possible answers | | Answer |
|------------------|---------------------------------|--------|
| a) | Increased pressure in line | |
| b) | Blockage in the discharge line | |
| c) | Higher than normal temperatures | |
| d) | Cavitation in pump | |

End of Knowledge Test

MOET – Plant Operation Technician Practice Paper

Answer Scheme

| 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 | C |
| 10 | C | 25 | C |
| 11 | A | 26 | C |
| 12 | D | 27 | B |
| 13 | C | 28 | C |
| 14 | B | 29 | D |
| 15 | B | 30 | D |