

Please read the instructions printed at the end of this form. One of these sheets, suitably completed, should be attached to the assessed work of each candidate.

Unit Title	Optimising performance in engineering systems and products	Unit Code	R104	Series		Year	
Centre Name					Centre Number		
Candidate Name					Candidate Number		

Marking Criteria – Total Marks for this unit is 60

Mark Band 1	Mark Band 2	Mark Band 3	Teacher Comment	Page
LO1: Understand why engineering systems and products are designed and maintained for optimum performance			<div style="border: 1px solid black; width: 50px; height: 50px; margin: auto;">Mark</div>	
<p>Limited explanation of why systems and products are designed for maintenance.</p> <p style="text-align: center;">1 – 2 marks</p>	<p>Adequately explains why systems and products are designed for maintenance.</p> <p style="text-align: center;">3 – 4 marks</p>	<p>Comprehensively explains why systems and products are designed for maintenance.</p> <p style="text-align: center;">5 – 6 marks</p>		
<p>Demonstrates basic understanding of optimum performance in engineered systems/products, with limited appreciation of the reasons for maintenance and repair and the implications of not maintaining engineered systems/products.</p> <p style="text-align: center;">1 – 4 marks</p>	<p>Demonstrates detailed understanding of optimum performance in engineered systems/products, with some appreciation of the reasons for maintenance and repair and the implications of not maintaining engineered systems/products.</p> <p style="text-align: center;">5 – 8 marks</p>	<p>Demonstrates comprehensive understanding of optimum performance in engineered systems/ products, with a clear appreciation of the reasons for maintenance and repair and the implications of not maintaining engineered systems/products.</p> <p style="text-align: center;">9 – 12 marks</p>		
LO2: Know methods used in engineering sectors to maintain optimum performance			<div style="border: 1px solid black; width: 50px; height: 50px; margin: auto;">Mark</div>	
<p>Demonstrates basic knowledge of methods used to optimise performance in engineered systems/products.</p> <p style="text-align: center;">1 – 4 marks</p>	<p>Demonstrates some detailed knowledge of methods used to optimise performance in engineered systems/ products.</p> <p style="text-align: center;">5 – 8 marks</p>	<p>Demonstrates detailed knowledge of methods used to optimise performance in engineered systems/products.</p> <p style="text-align: center;">9 – 12 marks</p>		

L03: Understand factors that contribute to the system/product failure			Teacher Comment	Page
<p>Describes a limited range of system/component failures and for each, demonstrates a basic understanding of reason/s for failure.</p> <p style="text-align: right;">1 – 4 marks</p>	<p>Describes a range of system/component failures in some detail and for each, demonstrates a sound understanding of reason/s for failure.</p> <p style="text-align: right;">5 – 8 marks</p>	<p>Comprehensively describes a wide range of system/ component failures and for each, demonstrates a thorough understanding of reason/s for failure.</p> <p style="text-align: right;">9 – 12 marks</p>	<div style="border: 1px solid black; width: 50px; height: 50px; margin: 0 auto;">Mark</div>	
L04: Be able to perform simple procedures to optimise product system/performance			<div style="border: 1px solid black; width: 50px; height: 50px; margin: 0 auto;">Mark</div>	
<p>With regular assistance follows manufacturer's instructions/manual /disassembly procedure, adhering to most special instructions when carrying out replacement tasks and performance checks.</p> <p>Requires regular assistance to carryout simple replacement tasks using appropriate tools with limited effectiveness. Shows a basic appreciation of potential hazards and safety considerations.</p> <p>Requires regular assistance to carryout simple performance checks using appropriate tools with limited effectiveness. Shows a basic appreciation of potential hazards and safety considerations.</p> <p>Draws upon limited skills/knowledge/understanding from other units in the specification.</p> <p style="text-align: right;">1 – 6 marks</p>	<p>With some assistance follows manufacturer's instructions/manual /disassembly procedure, adhering to most special instructions when carrying out replacement tasks and performance checks.</p> <p>Works competently with occasional assistance to carryout simple replacement tasks using appropriate tools with some effectiveness. Shows an adequate appreciation of potential hazards and safety considerations.</p> <p>Works competently with occasional assistance to carryout simple performance checks using appropriate tools with some effectiveness. Shows an adequate appreciation of potential hazards and safety considerations.</p> <p>Draws upon some relevant skills/knowledge/ understanding from other units in the specification.</p> <p style="text-align: right;">7 – 12 marks</p>	<p>Competently follows manufacturer's instructions/ manual /disassembly procedure, adhering to all special instructions when carrying out replacement tasks and performance checks.</p> <p>Works independently and competently to carryout simple replacement tasks using appropriate tools effectively. Shows a thorough appreciation of potential hazards and safety considerations.</p> <p>Works independently and competently to carryout simple performance checks using appropriate tools effectively. Shows a thorough appreciation of potential hazards and safety considerations.</p> <p>Clearly draws upon relevant skills/knowledge/ understanding from other units in the specification.</p> <p style="text-align: right;">13 – 18 marks</p>		
Total/60				
If this work is a re-sit, please tick	Session and Year of previous submission		Please tick to indicate this work has been standardised internally	

Guidance on Completion of this Form

Please note: This form may be updated on an annual basis. The current version of this form will be available on the OCR website (www.ocr.org.uk).

Guidance on Completion of this Form

- 1 **One** sheet should be used for each candidate.
- 2 Please ensure that the appropriate boxes at the top of the form are completed.
- 3 Please enter *specific* page numbers where evidence can be found in the portfolio, and where possible, indicate to which part of the text in the mark band the evidence relates.
- 4 Circle the mark awarded for each strand of the marking criteria in the appropriate box and enter the circled mark in the final column.
- 5 Add the marks for the strands together to give a total out of 60 Enter this total in the relevant box.