

## Engineering

OCR Level 2 Principal Learning

Unit **F548**: The engineered world

## Mark Scheme for January 2012

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This mark scheme is published as an aid to teachers and students, to indicate the requirements of the examination. It shows the basis on which marks were awarded by examiners. It does not indicate the details of the discussions which took place at an examiners' meeting before marking commenced.

All examiners are instructed that alternative correct answers and unexpected approaches in candidates' scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.

Mark schemes should be read in conjunction with the published question papers and the report on the examination.

OCR will not enter into any discussion or correspondence in connection with this mark scheme.

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Question	Answer	Marks	Guidance
1	<p>Band 1 Limited explanation – award one mark for identifying an engineering achievement and up to a further two marks for relevant points about human effects that have resulted from this achievement.</p> <p>Band 2 Adequate explanation – award one mark for identifying an engineering achievement and up to a further five marks for including depth or breadth regarding the human effects that have resulted from this achievement.</p> <p>Band 3 Detailed explanation – award one mark for identifying an engineering achievement and up to a further nine marks for including clear and logical examples of the human effects that have resulted from this achievement.</p> <p>Depth: Expansion of a single human effect. Breadth: Expansion involving multiple human effects.</p>	<p>Up to 3</p> <p>Up to 6</p> <p>Up to 10</p> <p>Total 10</p>	<p>For answers marked by levels of response:</p> <p><b>To determine the level</b> – start at the highest level and work down until you reach the level that matches the answer</p> <p><b>To determine the mark within the level</b>, refer to the chart in 10</p>
2	<p>Band 1 Limited explanation – award one mark for identifying a single political issue and up to a further two marks for relevant points.</p> <p>Band 2 Adequate explanation – award up to six marks for a response that considers at least two political issues in depth or breadth.</p> <p>Band 3 Detailed explanation – award up to six marks for a response that considers at least two political issues and up to a further four marks for including logical and relevant supporting evidence that demonstrates both depth and breadth.</p> <p>Depth: Expansion of a single political issue. Breadth: Expansion involving the linking of political issues with other issues eg human, social and economic.</p>	<p>Up to 3</p> <p>Up to 6</p> <p>Up to 10</p> <p>Total 10</p>	

Question		Answer	Marks	Guidance
3		<p>Band 1 Limited information – award one mark for identifying an appropriate professional body and up to a further two marks for relevant points about the professional body.</p> <p>Band 2 Adequate information – award one mark for identifying an appropriate professional body and up to a further five marks for explaining the work it does.</p> <p>Band 3 Detailed information – award one mark for identifying an appropriate professional body and up to a further nine marks for explaining the work it does and outlining the merits of membership including logical and relevant supporting evidence.</p>	<p>Up to 3</p> <p>Up to 6</p> <p>Up to 10</p>	<p>For answers marked by levels of response:</p> <p><b>To determine the level</b> – start at the highest level and work down until you reach the level that matches the answer</p> <p><b>To determine the mark within the level</b>, refer to the chart in 10</p>
4	(a) (b)	<p>Band 1 Limited information – award two marks for naming two sectors and one mark for a relevant point about the job role of a professional person</p> <p>Band 2 Adequate information – award two marks for naming two sectors and up to four further marks for a response with depth or breadth about the job role of a professional person</p> <p>Band 3 Detailed information – award two marks for naming two sectors and up to eight further marks for a response with depth and breadth about the job role of a professional person</p> <p>Depth: Focussing on a single role in a single sector Breadth: Multiple roles in a single sector or, a single role in more than one sector</p>	<p>Up to 3</p> <p>Up to 6</p> <p>Up to 10</p>	

Question		Answer	Marks	Guidance
5	(a) (b)	Band 1 Limited explanation – award up to two marks for explaining the difference between a renewable resource and a non-renewable resource and one mark for a response that gives information about the recycling of materials	Up to 3	For answers marked by levels of response:  <b>To determine the level</b> – start at the highest level and work down until you reach the level that matches the answer  <b>To determine the mark within the level</b> , refer to the chart in 10
		Band 2 Adequate explanation – award up to two marks for explaining the difference between a renewable resource and a non-renewable resource and up to four further marks for a response about the recycling of materials which includes relevant supporting examples from the engineering industry	Up to 6	
		Band 3 Detailed explanation – award up to two marks for explaining the difference between a renewable resource and a non-renewable resource and up to eight further marks for a response about the recycling of materials which includes logical and relevant supporting examples from the engineering industry	Up to 10	
6		Band 1 Limited explanation – award one mark for a basic definition of the duties of an employee, one mark for the duties of an employer, and one mark for making reference to legal responsibilities	Up to 3	
		Band 2 Adequate explanation – award one mark for a definition of the duties of an employee, one mark for the duties of an employer, one mark for making reference to legal responsibilities and up to three further marks for a response which includes relevant examples	Up to 6	
		Band 3 Detailed explanation – award one mark for a definition of the duties of an employee, one mark for the duties of an employer, one mark for making reference to legal responsibilities and up to five further marks for a response which includes logical and relevant examples. Additionally, two marks for reference to appropriate legislation	Up to 10	

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