BOARD OF STUDIES
NEW SOUTH WALES

2010 HSC Industrial Technology
Metal and Engineering Technologies
Marking Guidelines

Section I

Question	Answer
1	D
2	A
3	C
4	D
5	D
6	B
7	C
8	C
9	C
10	B

Section II

Question 11

Criteria	Marks
• Correctly identifies a suitable section of metal and provides an appropriate reason for the choice	1

Question 12

Criteria	Marks
• Provides characteristics and features of an industrial process used by industry	2
• Recognises and names a process used by industry OR • Lists the steps in a process used by industry	1

Question 13

Criteria	Marks
• Indicates a suitable method for attaching the coupling and provides a reason for choosing this method	2
• Names and sketches in general terms an acceptable method of attachment	1

Question 14 (a)

Criteria	Marks
• Provides an explanation of why the distortion takes place	1

Question 14 (b)

Criteria	Marks
• Sketches in general terms TWO or more methods used to minimise distortion	2
• Sketches in general terms ONE method used to minimise distortion OR • Recognises and names TWO or more methods used to minimise distortion	1

Question 15 (a)

Criteria	Marks
• Recognises and names a suitable machine that could be used to shape the stub axles	1

Question 15 (b)

Criteria	Marks
• Provides characteristics and features of the process used to produce the taper	2
• Indicates the main features of the process	1

Question 16

Criteria	Marks
• Identifies issues and provides points for TWO or more finishing methods used to protect from corrosion	4
• Provides characteristics and features of TWO or more finishing methods used to protect from corrosion	3
• Sketches in general terms, indicates the main features of two finishing methods used to protect from corrosion OR • Provides characteristics and features of ONE finishing method used to protect from corrosion	2
• Sketches in general terms and indicates the main features of ONE finishing method used to protect from corrosion OR • Recognises and names TWO finishing methods used to protect from corrosion	1

Section III

Question 17 (a)

Criteria	Marks
• Sketches in general terms environmental factors which may impact on expansion	3
• Identifies environmental factors which may impact on expansion	2
• Identifies an environmental factor which may impact on expansion	1

Question 17 (b)

Criteria	Marks
• Analyses the relationships between the structural, technical and personnel issues that need to be considered prior to relocating	10–12
• Show the relationship between structural and technical OR structural and personnel OR technical and personnel issues prior to relocating	7–9
• Provides features of structural and technical OR structural and personnel OR technical and personnel issues	4–6
• Outlines the structural or technical or personnel issues	1–3

Industrial Technology
Metal and Engineering Technologies
2010 HSC Examination Mapping Grid

Question	Marks	Content	Syllabus outcomes
Section I			
1	1	Materials – Properties	H4.3
2	1	Materials – Mining/Refining	H4.3
3	1	Materials – Modification of properties	H4.3
4	1	Materials/Processes	H1.2, H4.3
5	1	Processes – Joining	H1.2
6	1	Processes – Machining	H1.2
7	1	Processes – Forming	H3.2
8	1	Processes/Machining Tools Machinery	H3.2
9	1	Processes/Joining/Tools Machinery	H1.2
10	1	Processes - Forming	H3.2
Section II			
11	1	Materials	H4.3
12	2	Processes – Forming	H1.2
13	2	Processes – Joining	H1.2
14(a)	1	Processes – Joining	H4.3, H1.2
14(b)	2	Processes – Joining	H1.2, H4.3
15(a)	1	Tools and Machinery	H1.2
15(b)	2	Processes – Machining	H1.2, H4.3
16	4	Processes - Finishing	H4.3, H1.2
Section III			
17(a)	3	Environmental and Sociological considerations	H7.1, H1.1
17(b)	12	Structural considerations, Technical considerations, Personnel considerations	H1.1, H7.1