BOARD OF STUDIES
NEW SOUTH WALES

2010 HSC Industrial Technology
Automotive Technologies
Marking Guidelines

Section I

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

Section II

Question 11

Criteria	Marks
• Correctly names the part indicated	1

Question 12

Criteria	Marks
• Indicates why digital instruments are replacing mechanical gauges	2
• Lists a feature of a mechanical or digital gauge	1

Question 13

Criteria	Marks
• Identifies advantages and disadvantages of using composite materials in vehicles	2
• Identifies advantages or disadvantages of composite materials	1

Question 14

Criteria	Marks
• Provides characteristics and features of the operation of a torque wrench and provides an accurate sketch	3
• Sketches in general terms the operation of a torque wrench and provides a sketch	2
• Sketches in general terms the operation of a torque wrench OR sketches a torque wrench	1

Question 15

Criteria	Marks
• Relates the cause and effect of the operation of a wheel cylinder in a drum brake system with an accurate sketch	3
• Provides characteristics and features of a wheel cylinder in a drum brake system with a sketch	2
• Indicates the main features of a wheel cylinder OR • Provides a sketch	1

Question 16

Criteria	Marks
• Provides why and/or how engine management systems are different to distributor ignition systems and makes the relationship between them evident	4
• Provides characteristics of engine management systems and indicates how they are different to distributor ignition systems	3
• Sketches in general terms why engine management systems are different to distributor ignition systems	2
• Indicates a feature of an engine management system OR a distributor ignition system	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
• Shows 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
Automotive Technologies
2010 HSC Examination Mapping Grid

Question	Marks	Content	Syllabus outcomes
Section I			
1	1	Government and Statutory regulations	H6.2
2	1	Fuel systems	H4.3
3	1	Transmission	H3.1
4	1	Wheels and tyres	H3.1
5	1	Government and Statutory regulations	H6.2
6	1	Cooling systems	H4.3
7	1	Engine and related components	H3.1
8	1	Transmission	H3.2
9	1	Government and Statutory regulations	H1.2
10	1	Fuel systems	H3.2
Section II			
11	1	Transmission	H3.1
12	2	Instrumentation and indicators	H4.3
13	2	Automatic design	H4.3
14	3	Tools and equipment	H2.1
15	3	Braking systems	H4.3
16	4	Engine management systems	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, H7.2