



**B O A R D O F S T U D I E S**  
NEW SOUTH WALES

## **2011 HSC Industrial Technology Automotive Technologies Marking Guidelines**

### **Section I**

#### **Multiple-choice Answer Key**

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

## Section II

### Question 11

Criteria	Marks
• Correctly identifies a reason for brake fade	1

### Question 12

Criteria	Marks
• Clearly states essential features associated with child restraint	2
• Identifies basic information related to child restraints OR clearly states ONE essential feature/area associated with a child restraint	1

### Question 13

Criteria	Marks
• Clearly states problems associated with changing the ride height of a vehicle	2
• Clearly states a problem with changing the ride height OR list of problems	1

### Question 14

Criteria	Marks
• Identifies advances and provides characteristics/features that contribute to improving braking efficiency	3
• Outlines advances in braking technology OR identifies ONE advance in brake technology and provides characteristics that contribute to improving braking efficiency	2
• Identifies a brake technology	1

### Question 15

Criteria	Marks
• Provides clear cause and effect for how the operation of the venturi operates/works in a carburetted system	3
• Provides characteristics and features of a venturi in a carburettor	2
• Indicates feature/s of the venturi in relation to the carburettor	1

**Question 16**

Criteria	Marks
<ul style="list-style-type: none"> <li>Provides clearly annotated sketch with a clear cause and effect of how oil moves around a 4-stroke motor</li> </ul>	4
<ul style="list-style-type: none"> <li>Provides a clearly annotated sketch and sketches in general terms how oil moves around a motor</li> </ul>	3
<ul style="list-style-type: none"> <li>Provides a clearly annotated sketch and basic movement identified</li> </ul> OR <ul style="list-style-type: none"> <li>Sketches in general terms how oil moves around a motor and a limited sketch that relates to oil movement</li> </ul>	2
<ul style="list-style-type: none"> <li>Provides a general sketch only (sketch must relate to oil movement)</li> </ul> OR <ul style="list-style-type: none"> <li>Provides basic information about oil movement around the engine</li> </ul>	1

**Section III**
**Question 17 (a)**

Criteria	Marks
<ul style="list-style-type: none"> <li>Provides characteristics and features of personnel issues the company needs to consider when staffing the new facility</li> </ul>	5
<ul style="list-style-type: none"> <li>Sketches in general terms personnel issues the company needs to consider when staffing the new facility</li> </ul>	3–4
<ul style="list-style-type: none"> <li>Identifies personnel issues the company needs to consider when staffing the new facility</li> </ul>	1–2

**Question 17 (b)**

Criteria	Marks
<ul style="list-style-type: none"> <li>Identifies factors and makes the relationships evident, how they could affect the viability of the company and the establishment of a facility in a new location evident, other than personnel issues</li> </ul>	9–10
<ul style="list-style-type: none"> <li>Identifies factors, and provides points on how they could affect the viability of the company and the establishment of a facility in a new location, other than personnel issues</li> </ul>	7–8
<ul style="list-style-type: none"> <li>Provides characteristics and features of factors that could affect the viability of the company when establishing a facility in a new location, other than personnel issues</li> </ul>	5–6
<ul style="list-style-type: none"> <li>Sketches in general terms factors that could affect the viability of the company when establishing a facility in a new location, other than personnel issues</li> </ul>	3–4
<ul style="list-style-type: none"> <li>Indicates factors that could affect the viability of the company when establishing a facility in a new location, other than personnel issues</li> </ul>	1–2

# Industrial Technology

## Automotive Technologies

### 2011 HSC Examination Mapping Grid

#### Section I

Question	Marks	Content	Syllabus outcomes
1	1	Tools and equipment	H1.2
2	1	Engine and related components	H6.2
3	1	Body electrical system	H1.2
4	1	Transmission	H1.2
5	1	Engine types	H4.3
6	1	Energy types, fuels and lubricants	H3.2
7	1	Transmission	H3.3
8	1	Energy types, fuels and lubricants	H1.2
9	1	Energy types, fuels and lubricants	H3.2
10	1	Cooling systems	H4.3

#### Section II

Question	Marks	Content	Syllabus outcomes
11	1	Braking systems	H4.3
12	2	Automotive design	H1.1
13	2	Suspension systems/Government and statutory regulations	H4.3
14	3	Braking systems	H1.1
15	3	Fuel systems	H1.2, H4.3
16	4	Engine and related components	H3.1, H4.3

#### Section III

Question	Marks	Content	Syllabus outcomes
17 (a)	5	Occupational health and safety	H1.1, H1.2
17 (b)	10	Occupational health and safety	H1.1, H1.2, H6.2, H7.1