



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

2011 HSC Industrial Technology Electronics Technologies Marking Guidelines

Section I

Multiple-choice Answer Key

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

Section II

Question 11

Criteria	Marks
<ul style="list-style-type: none">Gives one relevant way in which diodes can be damaged in working electronic circuits	1

Question 12

Criteria	Marks
<ul style="list-style-type: none">Outlines reasons why light emitting diodes (LEDs) are replacing filament globes	2
<ul style="list-style-type: none">Identifies a relevant property of a LED	1

Question 13

Criteria	Marks
<ul style="list-style-type: none">Provides characteristics and features which should be considered when selecting a loudspeaker	2
<ul style="list-style-type: none">Sketches in general terms a property which should be considered when selecting a loudspeaker	1

Question 14

Criteria	Marks
<ul style="list-style-type: none">Indicates the main features of the relationship between primary and secondary coils of the transformer	3
<ul style="list-style-type: none">Indicates features of the relationship between the primary and secondary coils of a transformer <p>OR</p> <ul style="list-style-type: none">Indicates the main feature of the function of either the primary coil or secondary coil	2
<ul style="list-style-type: none">Lists/identifies more than ONE appropriate feature of either the primary coil or secondary coil	1

Question 15

Criteria	Marks
<ul style="list-style-type: none">Provides a correct answer (quantum and units) with a sequence of appropriate calculations	3
<ul style="list-style-type: none">Provides an incorrect answer with ONE or TWO minor errors in calculations	2
<ul style="list-style-type: none">Provides some evidence of which formulae to use	1

Question 16

Criteria	Marks
<ul style="list-style-type: none">Provides a correct PCB track layout for the circuit provided with relevant supporting information	4
<ul style="list-style-type: none">Provides a limited PCB track layout in the context of the circuit provided with relevant supporting information	3
<ul style="list-style-type: none">Provides a limited information PCB track layout OR	2
<ul style="list-style-type: none">Provides relevant information about PCB track layout	
<ul style="list-style-type: none">List/identifies suitable features of PCB track layouts	1

Section III**Question 17 (a)**

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

Question 17 (b)

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

Industrial Technology

Electronics Technologies

2011 HSC Examination Mapping Grid

Section I

Question	Marks	Content	Syllabus outcomes
1	1	Electrical principles	H4.3
2	1	Electrical principles	H4.3
3	1	Electrical principles	H4.3
4	1	Electrical principles	H3.1, H4.3
5	1	Electrical principles	H4.3, H6.1
6	1	Electrical principles Graphical communication	H3.1
7	1	Electrical principles Graphical communication	H1.2, H3.1, H4.3, H6.1
8	1	Electrical principles	H3.1, H4.3
9	1	Instruments and test equipment Electrical principles	H4.3
10	1	Graphical communication Circuitry	H3.1, H4.3

Section II

Question	Marks	Content	Syllabus outcomes
11	1	Electrical principles	H4.3, H6.1
12	2	Electrical principles	H4.3, H6.1
13	2	Electrical principles	H4.3, H6.1, H6.2
14	3	Electrical principles	H3.1, H4.3, H6.1
15	3	Circuitry	H3.1, H4.3
16	4	Processes, Circuitry	H1.2, H2.1, H3.1, H4.3, H6.2

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