

Competitor Feedback Form 2

Skill No.	16
Criterion ID	Industrial Electronics
Competition day	

Competitor No Competitor Name Date

Competition Heat/venue

Criterion ID	Criterion Description	Max Marks	Total averaged mark awarded
A (2h)	Assembly and Build project	30	
B (1h)	Design and Measurements)	15	
C (2h)	Electronic Fundamentals (Digital and Analogue)	40	
D (1/2)	'C' Programming	15	
Total Marks		100	

Comments:

Candidates Note:

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Date

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The Sector Skills Council
for Science, Engineering and
Manufacturing Technologies

Marking Schedule Form 1 Ob.

Skill No.	16
Criterion ID	(A)2.0-Assembly Project
Competition day	

Competitor No	<input type="text"/>	Competitor Name	<input type="text"/>	Date	May 2011
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Competition	Industrial Electronics	Heat/venue	Regional Final
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Aspect ID	Aspect of Criterion – Description	Max Mark	Requirement or Nominal Size	Result or Actual Value	Mark Awarded
A2.0	Component placement and Lead forming				
A2:1	Resistors: ease in reading colour code-consistency in placement orientation	2.5	Insertion: North-South/ East-West		
A2:2	Component Lead forming	2.5	Resistors and Diodes.		
		5.0			

Judge 1	Initials	Judge 2	Initials	Judge 3	Initials
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

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Marking Schedule Form 1 Ob.

Skill No.	16
Criterion ID	(A)3.0- Assembly Project
Competition day	

Competitor No	<input type="text"/>	Competitor Name	<input type="text"/>	Date	May 2011
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Competition	Industrial Electronics	Heat/venue	Regional Final
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Aspect ID	Aspect of Criterion – Description	Max Mark	Requirement or Nominal Size	Result or Actual Value	Mark Awarded
A3.0	Soldering Quality				
A3:1	Terminal block SK 6 ---- SK 20	2.0	IPC Standard		
A3:2	Edge connectors SK1 ----- SK5	2.0	IPC Standard		
A3:3	OPTO Couplers IC1 ----- IC5	2.0	IPC Standard		
A3:4	Modular jack SK----- 21	2.0	IPC Standard		
A3:5	Fuse holders F1 – F5	2.0	IPC Standard		
		10			

Judge 1	Initials	Judge 2	Initials	Judge 3	Initials
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Marking Schedule Form 1 Ob.

Skill No.	16
Criterion ID	(A)4.0- Assembly Project
Competition day	

Competitor No	<input type="text"/>	Competitor Name	<input type="text"/>	May 2011
Competition	Industrial Electronics	Heat/venue	Regional Final	

Aspect ID	Aspect of Criterion – Description	Max Mark	Requirement or Nominal Size	Result or Actual Value	Mark Awarded
A4.0	Testing				
A4:1	Connecting power , LEDs and resistors	1.50	Quality of connection		
A4:2	LED6 illuminated	0.50	Correct operation		
A4:3	LED 7 illuminated	0.50	Correct operation		
A4:4	Module testing	1.50	Correct operation		
A3:5	Demonstration to Judge	1.00	Correct operation		
		5.00			

Judge 1	Initials	Judge 2	Initials	Judge 3	Initials
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

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Marking Schedule Form 1 Ob.

Skill No.	16
Criterion ID	(B) Design and Measurement
Competition day	

Competitor No	<input type="text"/>	Competitor Name	<input type="text"/>	Date	May 2011
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Competition	Industrial Electronics	Heat/venue	Regional Final
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Aspect ID	Aspect of Criterion – Description	Max Mark	Requirement or Nominal Size	Result or Actual Value	Mark Awarded
B1.0	Measurement				
B1.1	Bulb resistance and Units	0.50	Value+ ohms		
B1:2	Schematic diagram and instruments	a) 0.50 b) 0.50 c) 0.50	Symbols, voltage and symbols		
B1:3	Measurements	a) 0.50 b) 0.50 c) 0.50 d) 1.50	voltage Current Calculate resistance Comment: Temperature coefficient of resistance		
		5.00			

Judge 1	Initials	Judge 2	Initials	Judge 3	Initials
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Aspect ID	Aspect of Criterion – Description	Max Mark	Requirement or Nominal Size	Result or Actual Value	Mark Awarded
B2.0	Measurement				
B2:1	Calculate frequency	1.0	Calculation		
B2:2	Connect circuit and monitor output	1.0	Frequency		
B2:3	Measure pulse, calculate and record duty cycle	0.5	Pulse width		
B2.4	Record voltage	0.5	Voltage		
B2.5	Repeat for other resistor combinations	1.0	Repeat above		
B2.6	Demonstrate functionality	1.0	Functionality		
		5.0			

Judge 1	Initials	Judge 2	Initials	Judge 3	Initials
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**Marking Schedule
Form 1 Ob.**

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Aspect ID	Aspect of Criterion – Description	Max Mark	Requirement or Nominal Size	Result or Actual Value	Mark Awarded
B3.0	Measurement and design				
B3:1	Show schematic	1.0	Schematic Dia.		
B3:2	Show calculation for gain	1.0	Calculation dB		
B3:3	Build circuit	1.0	Build quality		
B3:4	Graph the input voltage	1.0	Graph		
B3:5	Show functional circuit	1.0	Functionality		
		5.00			

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Marking Schedule

Form 1 Ob.

Skill No.	16
Criterion ID	(C) Electronic Fundamentals
Competition day	

Competitor No	<input type="text"/>	Competitor Name	<input type="text"/>	Date	May 2011
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Competition	Industrial Electronics	Heat/venue	Regional Final
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Aspect ID	Aspect of Criterion – Description	Max Mark	Requirement or Nominal Size	Result or Actual Value	Mark Awarded
C1.0	Analogue Fundamentals (Transistor Amplifier)				
C1.1	Prefix	1.0	Nano		
C1.2	Power of 10	1.0	2kv		
C1.3	Unit of power	1.0	Watt		
C1.4	Voltage	1.0	10v		
C1.5	a) Equivalent circuit Resistance	1.0	Calculate		
	b) Largest current path	1.0	Identify		
		6.00			

Judge 1	Initials	Judge 2	Initials	Judge 3	Initials
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Aspect ID	Aspect of Criterion – Description	Max Mark	Requirement or Nominal Size	Result or Actual Value	Mark Awarded
C2.0	Analogue Fundamentals Transistor Amplifier				
C2.1	R2	1.0	Calculate		
C2.2	R4	2.0	Calculate		
C2.3	Gain and Formula	3.0	Calculate		
C2.4	Vc	1.0	Calculate		
C2.5	Build and apply signal	1.0	Observe		
C2.6	Graph and input and output and determine gain	3.0	Measure and state		
C2.7	Functionality	1.0	Observe		
		12.00			

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Aspect ID	Aspect of Criterion – Description	Max Mark	Requirement or Nominal Size	Result or Actual Value	Mark Awarded
C3.0	Active Filter				
C3.1	R1 Open circuit	1.0	Fault symptoms		
C3.2	C1 open circuit	1.0	Fault symptoms		
C3.3	R1 Short circuit	1.0	Fault symptoms		
C3.4	C1 short circuit	1.0	Fault symptoms		
C3.5	R2 open circuit	1.0	Fault symptoms		
C3.6	R3 open circuit	1.0	Fault symptoms		
		6.00			

Judge 1	Initials	Judge 2	Initials	Judge 3	Initials
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Skill No.	16
Criterion ID	(D) 'C' Programming
Competition day	

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Aspect ID	Aspect of Criterion – Description	Max Mark	Requirement or Nominal Size	Result or Actual Value	Mark Awarded
D1	'C' - Programming				
D1.1	Re-type programme using 'C' language	2	'C' structure		
D1.2	Compile programme	2	demonstrate		
D1.3	Correct faults 1 to 10 and document	10	'C' language		
D1.4	Demonstrate working programme on computer screen	1	demonstrate		
		15			

Judge 1	Initials	Judge 2	Initials	Judge 3	Initials
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