

Design & Technology (Electronic Products)

General Certificate of Secondary Education **GCSE 1953**

General Certificate of Secondary Education (Short Course) **GCSE 1053**

Mark Schemes for the Components

June 2007

1953/1053/MS/R/07

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All Examiners are instructed that alternative correct answers and unexpected approaches in candidates' scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.

The reports on the Examinations provide information on the performance of candidates which it is hoped will be useful to teachers in their preparation of candidates for future examinations. It is intended to be constructive and informative and to promote better understanding of the syllabus content, of the operation of the scheme of assessment and of the application of assessment criteria.

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MARK SCHEMES FOR THE UNITS

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**Mark Scheme 1053/01, 1953/01
June 2007**

INSTRUCTIONS ON MARKING SCRIPTS

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For many question papers there will also be subject or paper specific instructions which supplement these general instructions. The paper specific instructions follow these generic ones.

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Before the Standardisation Meeting you must mark a selection of at least 10 scripts. The selection should be drawn from several Centres. The preliminary marking should be carried out **in pencil** in strict accordance with the mark scheme. In order to help identify any marking issues which might subsequently be encountered in carrying out your duties, **the marked scripts must be brought to the meeting.** (*Section 5c, page 6*)

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- a) Scripts must be marked in **red**, including those initially marked in pencil for the Standardisation Meeting.
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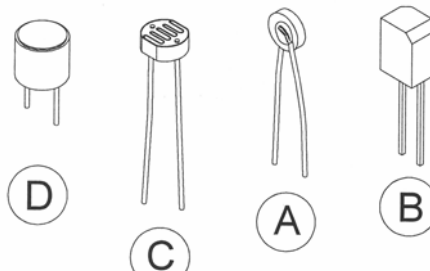
- i) Marked scripts must give a clear indication of how marks have been awarded, as instructed in the mark scheme.
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The Standardisation Meeting will include a discussion of marking issues, including:

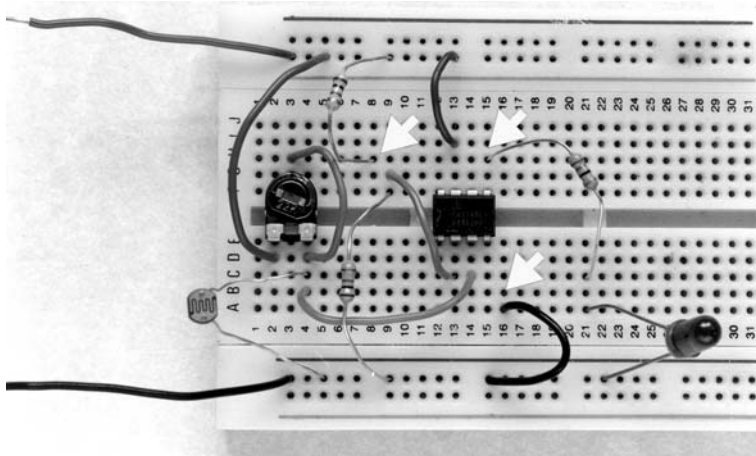
- a full consideration of the mark scheme in the context of achieving a clear and common understanding of the range of acceptable responses and the marks appropriate to them, and comparable marking standards for optional questions;
- the handling of unexpected, yet acceptable answers. (*Section 6a, bullet point 5, page 6*)

There will be times when you may not be clear how the mark scheme should be applied to a particular response. In these circumstances, a telephone call to the Team Leader should produce a speedy resolution to the problem. (*Appendix 5, para 17, page 26*)

1 (a)	<p>(i) 1 mark for each correct.</p> <div style="text-align: center;">  </div>	[4]
	<p>(ii) Component that senses heat is the thermistor (A), 1 mark. Accept any indication of the correct component.</p>	[1]
	<p>(iii) Cathode identified by one of the following:</p> <ul style="list-style-type: none"> • diode tester/multimeter • test in breadboard • pin diagram • slope/bevel on top of casing • trial and error. <p>1 mark for suitable method.</p>	[1]
(b)	<p>(i) 7/0.2mm wire multistrand – accept any indication of the correct wire.</p>	[1]
	<p>(ii) Reason should refer to flexibility, allowing movement without breaking. Accept insulation – or other good reason for wrong wire.</p>	[1]
	<p>(iii) Reasons could include:</p> <ul style="list-style-type: none"> • insulation of joint • strengthen joint • colour coding • neatness of joint. <p>1 mark each for two suitable reasons 2 x 1.</p>	[2]
	Total Marks	[10]

2 (a)	(i) Two parts of process in correct order 1 mark, all parts in correct order 2 marks.	[2]										
	<table border="1"> <tr> <td data-bbox="391 297 614 398">Clean heated soldering iron tip on damp</td> <td data-bbox="614 297 710 398">→</td> <td data-bbox="710 297 933 398"><i>Tin the soldering iron</i></td> <td data-bbox="933 297 1029 398">→</td> <td data-bbox="1029 297 1252 398"><i>Place soldering iron tip onto joint</i></td> </tr> <tr> <td data-bbox="391 398 614 504">Allow joint to cool</td> <td data-bbox="614 398 710 504">←</td> <td data-bbox="710 398 933 504"><i>Feed solder Into joint</i></td> <td data-bbox="933 398 1029 504">←</td> <td data-bbox="1029 398 1252 504"><i>Wait for heat to conduct</i></td> </tr> </table>	Clean heated soldering iron tip on damp	→	<i>Tin the soldering iron</i>	→	<i>Place soldering iron tip onto joint</i>	Allow joint to cool	←	<i>Feed solder Into joint</i>	←	<i>Wait for heat to conduct</i>	
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Allow joint to cool	←	<i>Feed solder Into joint</i>	←	<i>Wait for heat to conduct</i>								
	(ii) Reference to the toxic nature of lead, 1 mark. Allow general reference to health and safety or legal requirement.	[1]										
(b)	(i) Arrow next to resistance symbol or continuity test symbol))) , 1 mark. Allow other methods of indicating e.g. circle around resistance symbol.											
		[1]										
	(ii) Connections to form a circuit, 1 mark, diode cathode to battery negative, 1 mark, (other layouts are possible).											
		[2]										
(c)	Tool 1, 1 mark, accept side cutters or indication on Fig. 7.	[1]										
(d)	Soldering – low cost (accept ‘cheap’) – good / permanent connection – no extra	[1]										
	Screw terminals – easy to connect/disconnect – positions of wires changed easily,	[1]										
	Straight pin connector – easy / fast connection of multiple wires – only fits one way – strain relief – removable without any tools.	[1]										
Total Marks		[10]										

3	(a)	(i)	Substitution into formula $V = \frac{15000}{(22000 + 15000)} \times 5$, 1 mark Correct answer 2.03V (allow range 2.0V – 2.03V), 1 mark. Correct answer and substitution into formula with no working, 2 marks.	[2]
		(ii)	Voltage at Y increases when sensor is shaded, 1 mark.	[1]



(b)	(i)	Changes needed to breadboard: <ul style="list-style-type: none"> • 0V connection needs moving to pin 4 • two fixed resistors not joined in centre, top one needs moving over 1 hole • resistor from output is in pin 5 hole needs moving to pin 6. Allow answers drawn onto Fig 10 or reference to breadboard grid.	[1]
			[1]
	(ii)	dual in line, 1 mark	[1]
(c)	(i)	1 mark for each connection correct, 2 x 1.	
			[2]
	(ii)	The Darlington driver will amplify the current from the 3140 to operate the relay. Allow mark for understanding of the process.	[1]
Total Marks			[10]

4	(a)	(i)	Responses could include: Exploded isometric – assembly worker, accept reference to understanding how parts fit together. Accept reference to assembly instructions. Dimensioned orthographic – manufacturer or installer of the part - the user needs accurate detail. Perspective – client, customer, advertising producer - no technical knowledge assumed. Allow mark where understanding is shown.	[1]	
				[1]	
				[1]	
		(ii)	Largest drill size is $\varnothing 4.2\text{mm}$. Accept 4.2.	[1]	
		(iii)	If a minus tolerance were used the M4 screw could bind on the hole. Allow mark for understanding.	[1]	
		(b)	Reference to control of stock levels, 1 mark. Reference to ordering / reordering components, 1 mark.	[2]	
		(c)	(i)	Advantages for quality control could include: <ul style="list-style-type: none"> • testing of individual boards • accuracy during assembly • less expense if board is found to be faulty • ease of replacement • individual parts of the circuit can be developed/improved further, 2 x 1 marks. 	[2]
			(ii)	Reasons could include: <ul style="list-style-type: none"> • time / expense of reworking • small components do not allow reworking • repaired board may not be reliable • board has been superseded. • difficult to trace fault 1 mark for suitable reason.	[1]
				Total Marks	[10]

5	(a)	(i)	Benefit of LED display: <ul style="list-style-type: none"> • bright • easy to see • can be seen at night. • more robust <p>1 mark for suitable benefit.</p>	[1]
		(ii)	Benefit of LCD display: <ul style="list-style-type: none"> • longer battery life • greater range of characters • ability to make use of solar cells for power • uses less power. <p>1 mark for suitable benefit.</p>	[1]
	(b)	(i)	Reasons for using injection moulding could include: <ul style="list-style-type: none"> • numbers being produced • low cost of each moulding • accuracy – each case identical • level of detail required • ability to change colour of moulding easily. <p>1 mark each for two points made in explanation.</p>	[2]
		(ii)	Property required is flexibility , 1 mark. Allow mark for clear description or reasons for property being required.	[1]
	(c)	(i)	The notch in the key is for orientation to ensure that key is correct way up when assembled, 1 mark.	[1]
		(ii)	Reasons for reduced parts count could include: <ul style="list-style-type: none"> • less time spent in assembly • lower cost of assembly • less stock to be stored • less to go wrong with product • ease of recycling parts of the product. <p>1 mark for each valid reason. Do not accept 'cheap', 'easy' or other unjustified single word answers, 2 x 1 mark.</p>	[2]
	(d)		Explanation should include reference to: <ul style="list-style-type: none"> • reliability of conductive pads • ease of assembly • no metal on metal contact • gold plating lasts longer • less corrosion to cause poor contact • not affected as badly by atmospheric conditions. <p>1 mark for each of 2 relevant points in explanation. Do not accept 'cheap', 'easy' or other unjustified single word answers. Allow 2 marks for clear explanation of one point.</p>	[2]
Total Marks				[10]

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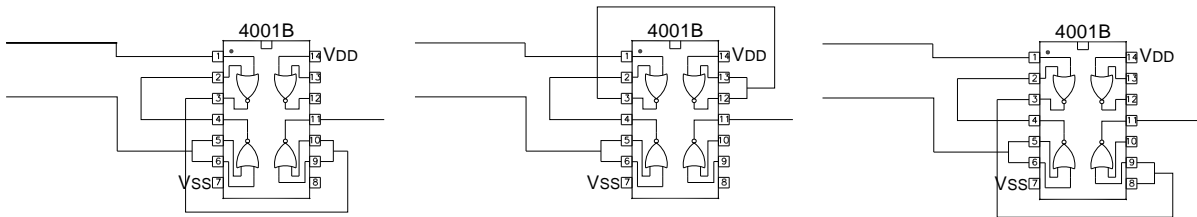
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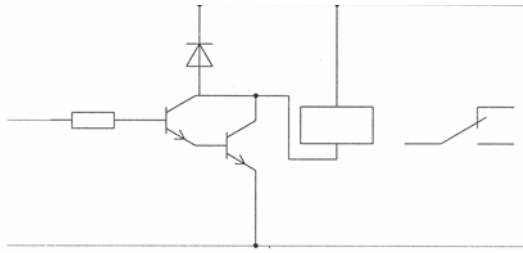
3 (a)	(i) Two stages in providing accurate time can include the following: <ul style="list-style-type: none"> • calculation of resistor/capacitor combination to use • use of on screen simulation to test values • use of breadboard testing • checking delay against known time source, ie stopwatch. 1 mark each for valid stages. 2 x 1.	[2]
	(ii) Functional advantages of microprocessor: <ul style="list-style-type: none"> • accurate timing • ease of changing delay • accurate repeat of time delay • reduced need for logic gates. 1 mark for functional reason.	[1]
(b)	(i) 1 mark for X column correct, 1 mark for Y column correct in relation to X column.	[2]

monostable	sensor	X	Y
0	0	0	1
0	1	1	0
1	0	0	1
1	1	0	1

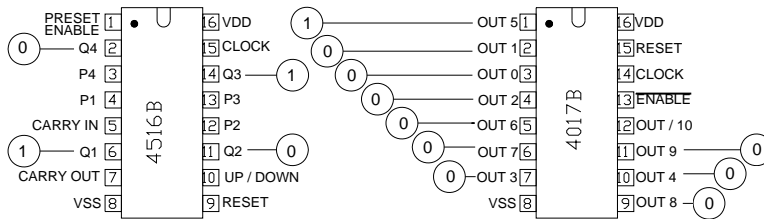
	(ii) 1 mark for left hand gate connections, 1 mark for final NOT gate inputs. eg allow use of alternative gates.	[2]
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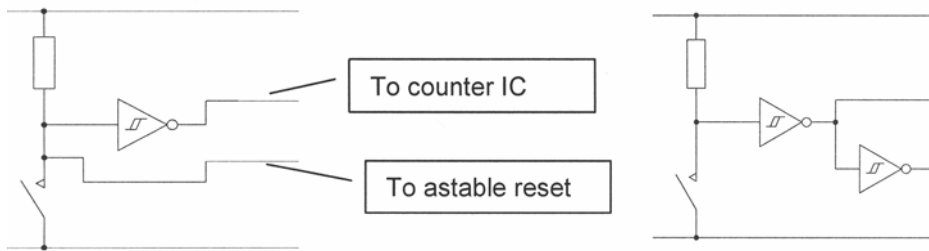
(c)	1 mark for use of transistor(s) for amplification, 1 mark for functional circuit. e.g. Allow use of Darlington array.	[2]
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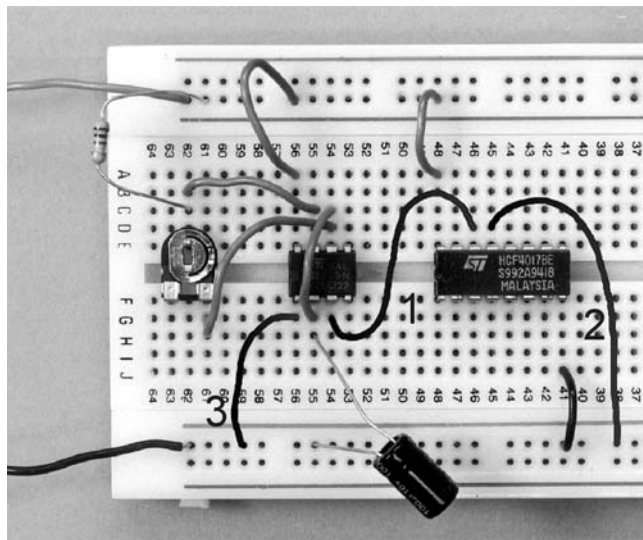
(d)	Precaution could include use of earthing, RCD device, double insulation, transformer, no physical contact. Allow reference to protection of circuit from water. 1 mark for suitable safety precaution.	[1]
Total Marks [10]		



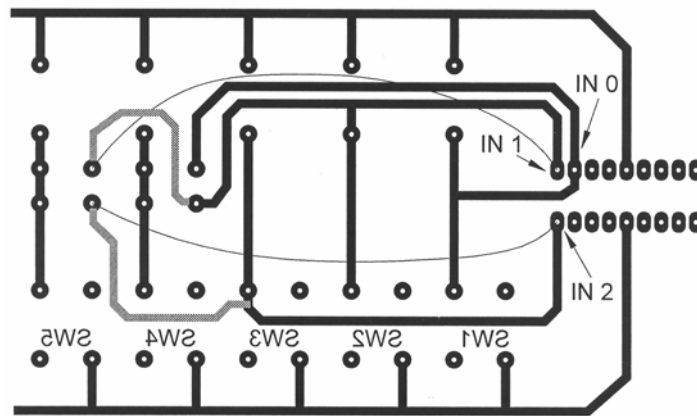
4	<p>(a) (i) 1 mark for 4516 outputs, 1 mark for 4017 outputs. [2]</p>
	<p>(ii) Advantage of 4516: Counts to 16 Allows longer total count Can give up/down count 1 mark each for suitable advantage, 2 x 1</p> <p>Advantage of 4017: Doesn't need understanding of binary Clear linear outputs Doesn't need logic or decoding</p> <p style="text-align: right;">[2]</p>
	<p>(b) 1 mark for correct connection to counter IC reset. 1 mark for correct connection to astable reset. [2]</p>



	<p>(c) Output 0 is not used because it will light when no time has elapsed and could be confusing to the user. Output 1 will light after the first astable cycle. No mark for repeating 'Q0 is high' without further explanation. 1 mark for understanding shown. [1]</p>
	<p>(d) 1 mark for each correct connection. 3 x 1. [3]</p>



5	(a)	(i) The diodes block the signal from switches 3, 4 and 5 from activating unwanted signals. 1 mark for mention of 'blocking' effect. 1 mark for consequences of signal being blocked.	[2]
		(ii) 8 combinations are available using 3 inputs.	[1]
(b)	(i)	1 mark for each track correctly routed. There are a number of possible solutions the one shown is the simplest. 2 x 1.	[2]



	(ii)	Features that can be controlled could include: <ul style="list-style-type: none"> • track width • shape, type and size of board • track direction • pad shape and dimension • copper fill • hole size in pad. Allow 1 mark for any suitable feature.	[1]
(c)		Benefits could include: <ul style="list-style-type: none"> • uses in a counting circuit • uses in a dimmer circuit • uses in combustible/flammable conditions • uses that require tactile feedback to operator. 2 x 1 allow marks for realistic uses.	[2]
(d)		Problems will include: <ul style="list-style-type: none"> • small workshops using existing stocks • solder used in repairs • imported goods • cost of new soldering equipment • not easy to check visually • cost of inspection and testing. 2 x 1 marks for clear descriptions of likely problems.	[2]
Total Marks			[10]

Mark Scheme 1953/03
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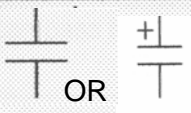
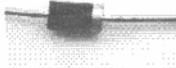

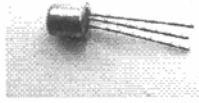
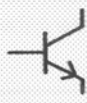

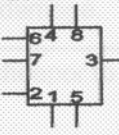
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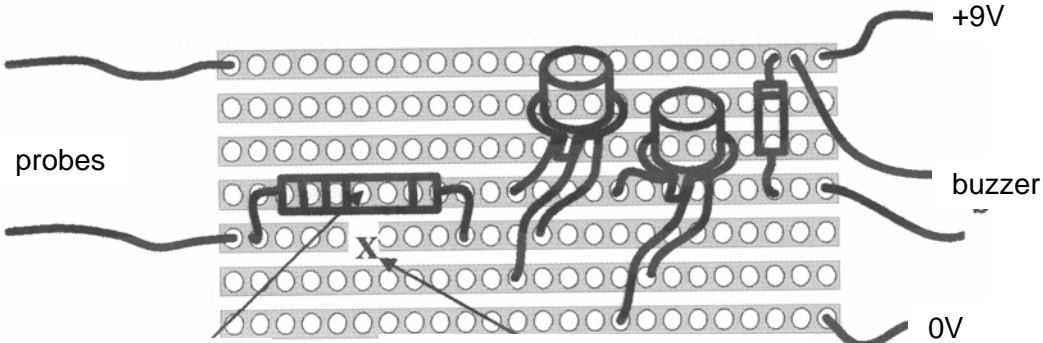
There will be times when you may not be clear how the mark scheme should be applied to a particular response. In these circumstances, a telephone call to the Team Leader should produce a speedy resolution to the problem. (*Appendix 5, para 17, page 26*)

Component	Symbol	Label
		47uF 10Vwkg
		10n 250V
		1N4004
		BC108
		NEC 555

1	(a)		
		1 mark for each correct placement.	[6]
	(b)	(i) Relay 1 mark.	[1]

	(ii) Part A contacts or switch, 1 mark. Part B coil (accept solenoid/electro magnet), 1 mark.	[2]
	(iii) SPDT/Single Pole Double Throw, 1 mark.	[1]

2	(a)			
		Resistors are fitted with aluminium cases to make them harder to break.	x	
		Resistors are fitted with aluminium cases to keep them cool.	✓	
		Aluminium cased resistors can pass the largest currents.	x	
		All resistors will heat up when passing a current.	✓	
		Only ceramic and aluminium cased resistors heat up when passing a current.	x	
		Ceramic cases are fitted to wire wound resistors to help them lie flat.	x	
		Ceramic cases are fitted to wire wound resistors to protect them against thermal damage.	✓	
		Carbon film resistors are cheaper to manufacture than wire wound resistors.	✓	
		1 correct tick plus 1 correct cross equals 1 mark		[4]
(b)	(i)	Method A, 1 mark. Accept indication on Figure 6.		[1]
	(ii)	Takes up less space on the board, or allows for more efficient cooling.		[1]
(c)	(i)	Circuit A = parallel. Circuit B = series.		[1] [1]
	(ii)	$I = V/R$ $I = 10/2000$ 1 mark for correct substitution. $= 0.005 \text{ (A) or } 5\text{mA}$ 1 mark for correct answer.		[1] [1]
		Correct answer with no working, 2 marks.		

<p>3 (a) (i)</p>	 <p>Resistor placed to the left of the transistors any location along 5th line down.</p> <p>Break indicated along fifth line down between the leads of the resistor, 1 mark</p>	<p>[2]</p>
	<p>(ii) Darlington pair.</p>	<p>[1]</p>
	<p>(iii) To increase the gain/to make the circuit more sensitive/amplify.</p>	<p>[1]</p>
	<p>(iv) To show understanding that the transistors need protection from back emf.</p>	<p>[1]</p>
	<p>(v) $H_{fe} = tr1(h_{fe}) * tr2(h_{fe})$ $75 * 75$ (1 mark) 5625 (2 marks for correct answer alone).</p>	<p>[2]</p>
<p>(b)</p>	<p>A working principle, 1 mark. Suitable materials ie a conductor and an insulator, 1 mark. Suitable electrical fixing of wires (soldering, screw terminal etc), 1 mark.</p>	<p>[3]</p>

4	(a)	(i)	Nylon/polypropylene/or any other suitable named thermoplastic. Not acrylic.	[1]
		(ii)	Brass/steel/aluminium or appropriate named alloys.	[1]
		(iii)	Injection moulding.	[1]
		(iv)	The high cost of making the mould. (Allow a mark for good reasoning relating to an incorrect answer in part (iii)). <i>Cost needs to be qualified</i>	[1]
(b)	(i)	A.	[1]	
	(ii)	No need for drilling matching holes. Accept a good reason for choosing a spacer other than A in part (i). Fast assembly.	[1]	
(c)	(i)	Using a template* for marking out, or Using a drilling jig* for location. Laser location. CAM. *Descriptions of the process acceptable.	[1]	
	(ii)	Time consuming/cost of replacement drills.	[1]	
	(iii)	Can produce a variety of hole shapes. Faster. Accurate location. Multiple holes at the same time. Automation Or other good reason. 1 mark each for any of two reasons.	[2]	

5	(a)	(i)	Save space on the device. Can be easily replaced if they go wrong. Can be used with more than one device. More economical than batteries.	
			Any correct answer, 1 mark.	[1]
		(ii)	No live mains cable/no bulky pack to fall and do damage.	[1]
	(b)	(i)	Double insulation symbol.	[1]
		(ii)	The input voltage. The output voltage. The input power. The output power. Operating frequency. Manufacturer. Country of manufacture. CE mark. BSI mark. Input current. Output current. AC or DC. Polarity.	
			Any two correct answers 1 mark each.	[2]
	(c)		The voltage remains constant, 1 mark even when load varies, 1 mark.	[2]
	(d)	(i)	Material is magnetic, 1 mark.	[1]
		(ii)	Ferrite core transformer, 1 mark.	[1]
		(iii)	Ferrite has a faster magnetic response time, 1 mark.	[1]

**Mark Scheme 1953/04
June 2007**

INSTRUCTIONS ON MARKING SCRIPTS

All page references relate to the Instructions to Examiner booklet (revised June 2006)

For many question papers there will also be subject or paper specific instructions which supplement these general instructions. The paper specific instructions follow these generic ones.

1 Before the Standardisation Meeting

Before the Standardisation Meeting you must mark a selection of at least 10 scripts. The selection should be drawn from several Centres. The preliminary marking should be carried out **in pencil** in strict accordance with the mark scheme. In order to help identify any marking issues which might subsequently be encountered in carrying out your duties, **the marked scripts must be brought to the meeting.** (*Section 5c, page 6*)

2 After the Standardisation Meeting

- a) Scripts must be marked in **red**, including those initially marked in pencil for the Standardisation Meeting.
- b) All scripts must be marked in accordance with the version of the mark scheme agreed at the Standardisation Meeting.
- f) **Annotation of scripts**

The purpose of annotation is to enable examiners to indicate clearly where a mark is earned or why it has not been awarded. Annotation can, therefore, help examiners, checkers, and those remarking scripts to understand how the script has been marked.

Annotation consists of:

- the use of ticks and crosses against responses to show where marks have been earned or not earned;
- the use of specific words or phrases as agreed at standardisation and as contained in the final mark scheme either to confirm why a mark has been earned or indicate why a mark has not been earned (e.g. indicate an omission);
- the use of standard abbreviations e.g. for follow through, special case etc.

Scripts may be returned to Centres. Therefore, any comments should be kept to a minimum and should always be specifically related to the award of a mark or marks and be taken (if appropriate) from statements in the mark scheme. General comments on a candidate's work must be avoided.

Where annotations are put onto the candidates' script evidence, it should normally be recorded in the body of the answer or in the margin immediately adjacent to the point where the decision is made to award or not award the mark.

d) Recording of marking: the scripts

- i) Marked scripts must give a clear indication of how marks have been awarded, as instructed in the mark scheme.
- ii) All numerical marks for responses to part questions should be recorded unringed in the right-hand margin. The total for each question (or, in specified cases, for each page) should be shown as a single ringed mark in the right-hand margin at the end of each question.
- iii) The ringed totals should be transferred to the front page of the script, where they should be totalled.
- iv) Every page of a script on which the candidate has made a response should show evidence that the work has been seen.
- v) Every blank page should be crossed through to indicate that it has been seen. (*Section 8a – d, page 8*)

e) Handling of unexpected answers

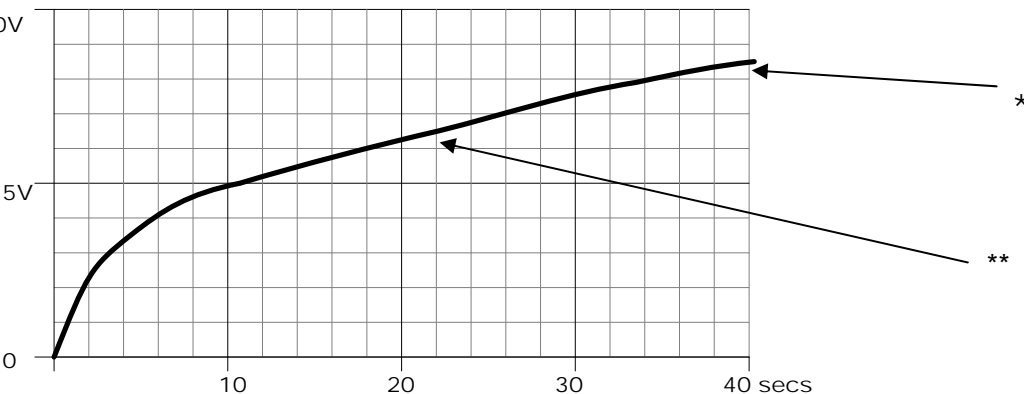
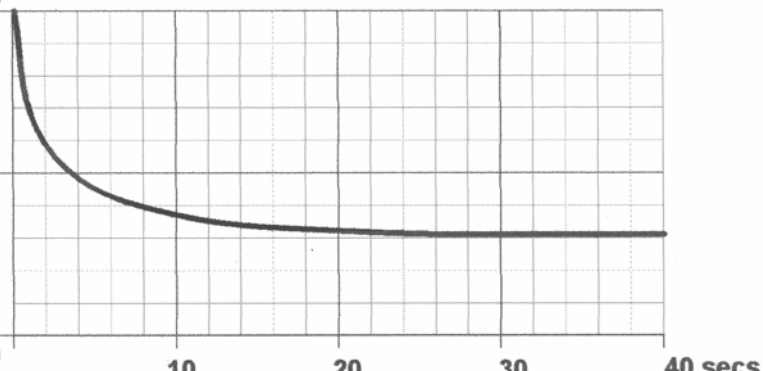
The Standardisation Meeting will include a discussion of marking issues, including:

- a full consideration of the mark scheme in the context of achieving a clear and common understanding of the range of acceptable responses and the marks appropriate to them, and comparable marking standards for optional questions;
- the handling of unexpected, yet acceptable answers. (*Section 6a, bullet point 5, page 6*)

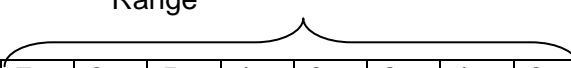
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1	(a)	(i)	Nylon/polypropylene/or any other suitable named thermoplastic. Not acrylic.	[1]
		(ii)	Brass/steel/aluminium or appropriate named alloys.	[1]
		(iii)	Injection moulding.	[1]
		(iv)	The high cost of making the mould. (Allow a mark for good reasoning relating to an incorrect answer in part (iii)). <i>Cost needs to be qualified</i>	[1]
	(b)	(i)	A.	[1]
		(ii)	No need for drilling matching holes. Accept a good reason for choosing a spacer other than A in part (i). Fast assembly.	[1]
	(c)	(i)	Using a template* for marking out, or Using a drilling jig* for location. Laser location. CAM. *Descriptions of the process acceptable.	[1]
		(ii)	Time consuming/cost of replacement drills.	[1]
		(iii)	Can produce a variety of hole shapes. Faster. Accurate location. Multiple holes at the same time. Automation. Or other good reason. 1 mark each for any of two reasons.	[2]

2	(a)	(i)	Save space on the device. Can be easily replaced if they go wrong. Can be used with more than one device. More economical than batteries. Any correct answer, 1 mark.	[1]
		(ii)	No live mains cable/no bulky pack to fall and do damage.	[1]
	(b)	(i)	Double insulation symbol.	[1]
		(iii)	The input voltage. The output voltage. The input power. The output power. Operating frequency. Manufacturer. Country of manufacture. CE mark. BSI mark. Input current. Output current. AC or DC. Polarity. Any two correct answers 1 mark each.	[2]
	(c)		The voltage remains constant, 1 mark even when load varies, 1 mark.	[2]
	(d)	(i)	Material is magnetic, 1 mark.	[1]
		(ii)	Ferrite core transformer, 1 mark.	[1]
		(iii)	Ferrite has a faster magnetic response time, 1 mark.	[1]

3	(a)	(i) Electrolytic	[1]
		(ii) Suffers from leakage or has a very poor tolerance accuracy also accept has to be inserted the right way around or polarised.	[1]
			[1]
	(b)	(i) Dielectric. Any recognised electrical insulator. Accept description (e.g. mastic film) or name of viable material.	[1]
		(ii) The working voltage/the maximum safe voltage	[1]
	(c)	(i) $0.01\mu\text{F} * 2200\text{R}$ or $10,000\mu\text{F} * 2\text{k}\Omega$ 1 mark for correct substitution into formula. 22secs 1 mark 2 marks for correct answer alone.	[2]
		(ii) 	
		1 mark for exponential curve. 1 mark for final charge falling between 8V-9V*. 1 mark for voltage reading of between 6V-7V at time constant (22 secs) or incorrect time constant carried forward from part (i)**.	[3]
		(iii) 	
		1 mark for correct discharge waveform.	[1]

4	(a)	(i)	Forward biased aligned with anode connected to +ve, cathode connected to –ve or to allow flow of current, 1 mark. Reverse biased aligned with anode connected to –ve, cathode connected to +ve or to block flow of current, 1 mark.		
		Allow any 2 correct statements for 1 mark.			[2]
		(ii)	6.4V.		[1]
		(iii)	Voltage regulator/7805.		[1]
	(b)	(i)	Two gate o/p's cannot be connected to operate together, 1 mark.		[1]
		(ii)	If one gate goes high and the other is low, 1 mark, current will flow and drag both gates down, 1 mark.		[2]
	(c)	(i)	1	TTL requires a 5V supply, or CMOS requires 3V-15V, 1mark.	[1]
			2	TTL need more current to operate, or CMOS requires less, 1 mark	[1]
		(ii)	'fan out' refers to the number of gate i/p's that a single gate o/p can drive.		[1]

5	(a)	(i)	255.										[1]																	
		(ii)	Because of the high speed , 1 mark. Only the numbers 1 to 6 are filtered out to display, 1 mark.										[2]																	
		(iii)	Decision accept compare .										[1]																	
		(iv)	Using a switch at the input, 1 mark. Using a pull up/pull down resistor, 1 mark.										[2]																	
	(b)	(i)	<div style="display: flex; justify-content: center; align-items: center;"> <div style="margin-right: 20px;">Output pin</div> <table border="1" style="border-collapse: collapse; text-align: center;"> <tr> <td>7</td><td>6</td><td>5</td><td>4</td><td>3</td><td>2</td><td>1</td><td>0</td> </tr> <tr> <td>0</td><td>0/1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>0</td> </tr> </table> </div> <p style="margin-left: 100px;">Range</p> 										7	6	5	4	3	2	1	0	0	0/1	1	1	1	1	1	0		
7	6	5	4	3	2	1	0																							
0	0/1	1	1	1	1	1	0																							
			<p>1 mark awarded for turning 5/6 outputs high in total in the range. A further 1 mark awarded if the outputs are correctly identified.</p>										[2]																	
		(ii)	<p>A common anode display would replace the common cathode type. The common connection of the display would be made to the +Ve rail instead of ground. The output states would be reversed.</p> <p>1 mark for each correct answer, up to a maximum of 2 marks.</p>										[2]																	

General Certificate of Secondary Education (D & T) (1053) June 2007 Assessment Series

Component Threshold Marks

Component	Max Mark	A	B	C	D	E	F	G
01	50	-	-	23	19	15	12	9
02	50	25	19	14	8	-	-	-
03	105	82	71	61	49	37	26	15

Syllabus Options

Foundation Tier

Max Mark	A*	A	B	C	D	E	F	G
Overall Threshold Marks	-	-	-	90	70	50	31	12
Percentage in Grade	-	-	-	8.3	33.4	33.3	8.3	16.7
Cumulative Percentage in Grade	-	-	-	8.3	41.7	75.0	83.3	100.0

The total entry for the examination was 12

Higher Tier

Max Mark	A*	A	B	C	D	E	F	G
Overall Threshold Marks	132	115	98	81	60	49	-	-
Percentage in Grade	8.7	30.4	34.8	21.8	4.3	0	-	-
Cumulative Percentage in Grade	8.7	39.1	73.9	95.7	100.0	100.0	-	-

The total entry for the examination was 24

Overall

	A*	A	B	C	D	E	F	G
Percentage in Grade	5.7	20.0	22.9	17.1	14.3	11.4	8.6	0
Cumulative Percentage in Grade	5.7	25.7	48.6	65.7	80.0	91.4	100.0	100.0

The total entry for the examination was 36

**General Certificate of Secondary Education (D & T) (1953)
June 2007 Assessment Series**

Component Threshold Marks

Component	Max Mark	A	B	C	D	E	F	G
01	50	-	-	23	19	15	12	9
02	50	25	19	14	8	-	-	-
03	50	-	-	24	21	18	15	12
04	50	20	15	11	6	-	-	-
05	105	82	71	61	49	37	26	15

Specification Options

Foundation Tier

	Max Mark	A*	A	B	C	D	E	F	G
Overall Threshold Marks	175	-	-	-	92	76	60	45	30
Percentage in Grade		-	-	-	27.8	26.5	21.0	12.2	7.6
Cumulative Percentage in Grade		-	-	-	27.8	54.3	75.3	87.5	95.1

The total entry for the examination was 1768

Higher Tier

	Max Mark	A*	A	B	C	D	E	F	G
Overall Threshold Marks	175	126	110	94	79	59	49	-	-
Percentage in Grade		11.0	21.4	28.8	23.9	10.8	2.0	-	-
Cumulative Percentage in Grade		11.0	32.4	61.2	85.1	95.9	97.9	-	-

The total entry for the examination was 2269

Overall

	A*	A	B	C	D	E	F	G
Percentage in Grade	6.3	12.3	16.4	25.6	17.5	10.1	5.2	3.3
Cumulative Percentage in Grade	6.3	18.6	35.0	60.6	78.1	88.2	93.4	96.7

The total entry for the examination was 4037

Statistics are correct at the time of publication.

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