

**Section 1 (20 marks)**

Question	Definitive Mark	Comment
1. (a)	1/1	Correct statement.
(b)	0/2	Answers are the wrong way round, no understanding shown.
2. (a)	0/2	No understanding shown.
(b)	0/2	No understanding shown.
3. (a)	1/3	1 mark given for current flow to saturation.
4.	2/3	Borderline for 2 marks, knowledge and skill confused but two skills can be picked out as circuit testing and circuit value calculation.
5.	2/4	One reasonable role statement given for each engineer.  NB: Engineering branches and sub-branches are ever evolving and so cannot be definitive in an answer.
6.	2/3	5% subtracted rather than added.

**Section 2 (70 marks)**

Question	Definitive Mark	Comment
7. (a) (i)	3/3	Correct expression provided.
(a)(II)	4/4	Correct conversion and simplification.
(b)(i)	2/2	Correct statement provided.
(b)(ii)	1/4	An acceptable description of comparator function given.
(c)	1/2	No clear explanation of Mark/Space given although time was mentioned.
8. (a)	2/4	Two acceptable steps carried out.
(b)(i)	3/3	Correct working and answer to this focussed task.
(b)(ii)	3/3	Correct working and answer.
(c)	5/5	Correct working and answer.
9. (a)	2/3	Two acceptable benefit points given although the third point is not a benefit.
(b)(i)	1/2	Voltage divider calculations incorrect although it has been correctly converted to speed.
(b)(ii)	1/2	Voltage divider calculations incorrect although it has been correctly converted to speed (implied from value though step not shown).
(c)	4/4	Correct working and answer.
(d)	NR/4	No response.
(e)	5/5	Correct working and answer.
10. (a)	0/2	Group air not explained.
(b)	6/7	Good explanation of circuit function.
(c)	3/3	Correct location and explanation.
(d)	0/8	No understanding shown, button 1 is not an output.
<b>Total marks</b>	<b>54/90</b>	