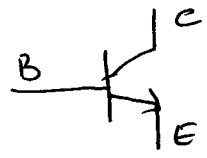



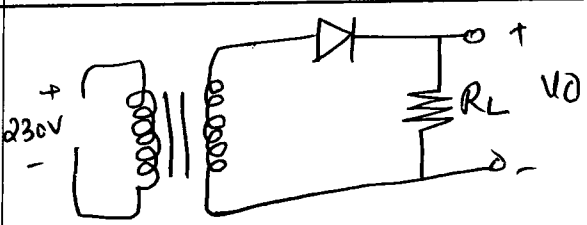
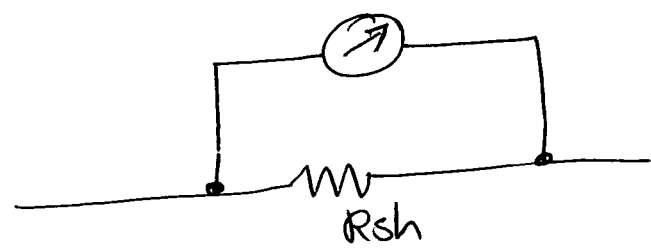
ANSWER KEY

FIRST YEAR HIGHER SECONDARY EXAMINATION MARCH 2023

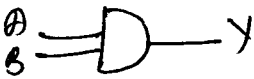

PART-III/III

SUBJECT: ELECTRONICSCODE NO: FY431VERSION: B60 SCORES2 HOURS

Qn. No	Sub Qns	Answer Key/Value Points	Score	Total Score
1.		ohm Ω	1	1
2.		.7 Volts	1	1
3.		Ampere	1	1
4.		.7 eV	1	1
5			1	1
6		40.6%	1	1
7.		$f = \frac{1}{2\pi LC}$	1	1
8		2	1	1
9.		a large value resistor in series		
10		Red Red yellow gold 2 2 10^4 $\pm 5\%$ $22 \times 10^4 \Omega \pm 5\%$	2	2

Qn. No	Sub Qns	Answer Key/Value Points	Score	Total Score
11		statement OR $V = I \cdot R$	2	2
12		Explanation	2	2
13.		symbol 	1	2
		use : voltage regulation	1	
14		$\alpha = \frac{\beta}{1+\beta}$ OR $\beta = \frac{\alpha}{1-\alpha}$	2	2
15		SCR structure	2	2
16.		circuit diagram	2	2
17		$A\beta = 1$ $\angle A\beta = 0^\circ$ OR 360°	1 1	2
18		$(1111)_2 = (15)_{10}$	2	2
19			2	2
20			2	2

Qn. No	Sub Qns	Answer Key/Value Points	Score	Total Score
21	a	$C = \frac{\epsilon A}{d}$	1	3
	b	ϵ - permittivity of the dielectric A - Area of conducting plate d - distance between conducting plates.	2	
22		Definitions of cycle Time period Frequency	1 1 1	3
23.		Energy band diagram of Insulator conductor semi conductor	1 1 1	3
24		V-I characteristics	3	3
25.		3 comparison points 1+1+1	3	3
26	a)	$r = \sqrt{\left(\frac{I_{rms}}{I_{dc}}\right)^2 - 1}$ or $r = \sqrt{\left(\frac{V_{rms}}{V_{dc}}\right)^2 - 1}$	2	3
	b)	$r = .48$	1	
27.		Any 3 points 1+1+1	3	3
28.		circuit diagram	3	3

Qn. No	Sub Qns	Answer Key/Value Points	Score	Total Score															
29		Symbol  Truth Table <table border="1" data-bbox="774 336 1029 526"> <thead> <tr> <th>A</th> <th>B</th> <th>Y</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td>1</td> </tr> <tr> <td>0</td> <td>1</td> <td>1</td> </tr> <tr> <td>1</td> <td>0</td> <td>1</td> </tr> <tr> <td>1</td> <td>1</td> <td>0</td> </tr> </tbody> </table>	A	B	Y	0	0	1	0	1	1	1	0	1	1	1	0	1 1/2	
A	B	Y																	
0	0	1																	
0	1	1																	
1	0	1																	
1	1	0																	
30		Input characteristics Output characteristics	2 2	4															
31.		Circuit diagram Input waveform Output waveform	2 1 1																
32.		Re coupled amplified circuit	4	4															
33.	a) b)	RC phase shift oscillator circuit $f = \frac{1}{2\pi\sqrt{6}RC}$	3 1	4															
34	a) b) c)	Symbol  $Y = A + B$ <table border="1" data-bbox="470 1545 742 1758"> <thead> <tr> <th>A</th> <th>B</th> <th>Y</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>0</td> <td>1</td> <td>1</td> </tr> <tr> <td>1</td> <td>0</td> <td>1</td> </tr> <tr> <td>1</td> <td>1</td> <td>1</td> </tr> </tbody> </table>	A	B	Y	0	0	0	0	1	1	1	0	1	1	1	1	1 1 2	
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