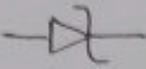


# ELECTRONICS



CODE: FY-231

## ANSWER KEY

FIRST YEAR HIGHER SECONDARY EXAM - SEPT/2021

Qn No.	Sub An.	Answer Key/Value points	Score	Total Score
1	-	Symbol.	1	1
2	-	$P = VI$	1	1
3	-		1	1
4	-	Emitter	1	1
5	-	$\beta = I_c / I_B$	1	1
6	-	any two applications	1	1
7	-	81.2%	1	1
8	-	$A = \frac{\text{o/p power}}{\text{i/p power}}$	1	1
9	-	Audio frequency or low frequency	1	1
10	-	2	1	1
11	-	any two applications in medical field	2	2
12	a	definition (in any form)	1	2
	b	Voltmeter	1	
13	-	explanation (1 score for each)	1+1	2
14	-	Draw the table	2	2
15	-	constructional diagram of NPN transistor	2	2
16	-	Amplifier biasing	2	2
17	-	Comparison	2	2
18	-	$ A\beta  = 1$ , $\angle A\beta = 0^\circ$ or $360^\circ$	1+1	2

19		Explanation Diagram	1 1	2
20		$(10110)_2 = 22$	2	2
21	a	Symbol	1	3
	b	factors (any two of $\epsilon, A, d$ )	2	
22		definitions (1 score for each)	1+1+1	3
23		Energy band diagrams (1 score for each)	1+1+1	3
24		explanation diagram	2 1	3
25		explanation (1 score for each)	1+1+1	3
26		symbol working	1 2	3
27	a	circuit diagram	2	
	b	$PIV = V_m$	1	3
28	a	any two disadvantages	2	
	b	voltage divider biasing	1	3
29		working diagram	2 1	3
30		$(101.1101)_2 = 5.8125$	3	3
31	a	symbols	1+1	4
	b	two types	2	

32	a	$40k\Omega$ (  )	[1+1]	2	4
	b	$10k\Omega$ (  )	[1+1]	2	4
33	a	Diagram -1, explanation -1		2	4
	b	Diagram -1, explanation -1		2	4
34	a	explanation		2	4
	b	explanation		2	4
35	a	Diagram		2	4
	b	Derivation		2	4
36		Comparison (any four points)		4	4
37	a	Diagram		2	4
	b	i/p, o/p waveforms - 1		2	4
		Working - 1			
38		circuit diagram of inverting amplifier non inverting amplifier		2	4
				2	
39	a	diagram		2	4
	b	explanations		2	4
40	a	Truth table - 1		2	4
		Symbol - 1			4
	b	NOR and NAND		2	

- 41 a equations 2  
 b equations 2 5  
 c  $75 \mu F$  1
- 42 Any five points 5 5
- 43 a circuit diagram 2  
 b i/p and o/p waveforms 2 5  
 c  $PIV = V_m$  1
- 44 a logic symbol and truth table 2  
 b symbol and truth table 2 5  
 c  $A \oplus B = A\bar{B} + \bar{A}B$  1

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