

FIRST YEAR HIGHER SECONDARY EXAMINATION MARCH 2019

SUBJECT : ELECTRONIC SYSTEMS

CODE. NO: FY 53

Qn No	Sub Qns	Answer Key/Value Points	Score	Total
1.		Any one application	1	1
2		Doping	1	1
3		+12	1	1
4		Light or optical	1	1
5		0	1	1
6.		V-I characteristics (1), cut in voltage (1)	2	2
7.		Statement - (2), equation only (1)	2	2
8		 (1), Truth table (1)	2	2
9		$\alpha = \frac{\beta}{1+\beta}$ (2) or $\beta = \frac{\alpha}{1-\alpha}$ (2)	2	2
10		Figure showing energy bands of insulator, semiconductor and metal (2 marks)	2	2

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11		circuit diagram of voltage divider (2)	2	2
12		Marking of Bandwidth - (1) frequencies - f_L & f_H - (1)	2	2
13		Any one application of LED (1) " " LCD (1)	2	2
14	a	wave form - 2 scores	2	3
	b	rms voltage - 1 score	1	
15		circuit of astable multivibrator	3	3
16		By adding trivalent impurity (1) Explanation or diagram (2)	3	3
17		a) $100\Omega \pm 5\%$ (1) b) $2.7k\Omega \pm 5\%$ (1) $R_{eq} = 96.4\Omega$ (1)	3	3
18	a)	circuit diagram of CE amplifier (2)	2	3
	b)	Input and output waveforms (1)	1	

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19		Logic diagram of Half adder (2) Truth table (2)	4	4
20		circuit diagram (2) Input and output waveforms (1) Marking of conducting path (1)	4	4
21	a, b,	Any two features Diagram showing structure of N-channel enhancement MOSFET	2 2	4
22	a, b,	Increases Explanation	1 3	4
23		Definition of ASK, FM, TDM, FDM (1×4)	4	4
24	a) b,	voltage, frequency, Time period, Phase angle, current (Any two parameters) Block diagram	2 3	5
25	a, b,	working - (2) equation - (1) $V_S = 55V - (1)$ $I_S = 400mA (1)$	2 3	5

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26	a, b, c,	True Explanation / Figure Figure	1 2 2	5
27		K-Map Entries - (2) Grouping - (2) Equation - (1)	5	5