RollNo.

ANNA UNIVERSITY (UNIVERSITY DEPARTMENTS)

B.E. /B.Tech / B. Arch (Full Time) - END SEMESTER EXAMINATIONS, NOV/DEC 2024

EE7152 - BASIC OF ELECTRONICS ENGINEERING
(Regulation2015)

Time:3hrs

Max.Marks: 100

PART- A(10x2=20Marks)

(Answer all Questions)

Q.No	Questions	Marks
1	Compare and contrast between intrinsic and extrinsic semiconductor.	2
2	What is a rectifier?	2
3	List the three modes of operation of BJT.	2
4	Write the current amplification factor for a CB transistor.	2
5	How transistor is different from FET?	2
6	Give any two applications of SCR	2
7	What is the function of a Phase shift circuit?	2
8	Sketch the Op-amp integrator & differentiator circuit.	2
9	State the laws of Boolean Algebra.	2
10	Give the advantage of R-2R ladder DAC?	2

PART- B(5x 13=65Marks)

Q.No	Questions	Marks
11 (a)	Explain the operation of PN junction diode in forward and reverse bias and plot its VI characteristics.	13
	(OR)	
11 (b)	With a neat circuit diagram explain the working of Half wave rectifier along with relevant waveforms.	13
12 (a)	Describe the input and output characteristics of BJT under common emitter configuration with necessary characteristic curves.	13
	(OR)	
12 (b)	With neat diagram discuss about fixed biasing and voltage divider biasing.	13
13 (a)	Draw the schematic and symbolic diagram of FET and discuss its different modes of operation with necessary characteristic curves.	13
	(OR)	
13 (b)	Explain in detail the working and characteristics of SCR with neat diagram.	13
14 (a)	Give detailed discussion about Hartley Oscillator.	13
	(OR)	
14 (b)	Explain Integrator and Differentiator with derivation in detail.	13

15 (a)	Explain any one type of Analog to digital converter in detail with neat diagrams.	13
	(OR)	
15 (b)	Discuss the Encoder and Decoder along with truth table and logic diagram.	13

PART- C(1x 15=15Marks)

(Q.No. 16 is Compulsory)

Q.No	Questions	Marks
16 (i)	Explain the working of Full adder using Truth table.	10
(ii)	An amplifier has a bandwidth of 500 kHz and a voltage gain of 100. If a negative feedback is introduced to extend the bandwidth to 5 MHz, then what is the value of new gain .	5