Code No: 11449/CBCS

FACULTY OF ENGINEERING

BE IV - Semester (CBCS)(M/P) (Main & Backlog) Examination, MAY /June 2019

Subject : Basic Electronics

Time: 3 Hours **Max Marks: 70**

Note: **Answer all questions from Part-A & Any Five questions From Part-B.**

Part - A (20 Marks)

1.	Define diffusion Current in a semiconductor	2
2.	Draw π - filter circuit	2
3.	How α and β are related to each other?	2
4.	A JFET has a drain current of 4 mA If I_{DSS} = 6mA and V_p = - 6V. Find the values of V_{GS} and V_{GS} (off)	2
5.	An amplifier has an open loop gain of 1000 and a feedback ratio of 0.04. If the open loop gain changes by 10% find the percentage change in gain of the amplifier with feedback	2
6.	A simple tank Circuit has an inductance of 1mH and a capacitor of 9.3 pF. Find its resonance frequency	2
7.	List the linear applications of an OP-AMP	2
8.	Draw the circuit of half adder and explain	2
9.	Draw the symbols of photo diode, photo transistor and SCR	2
10	Mention applications of CRO	2

PART – B (50 Marks)

11 a)	Describe Hall effect and derive the expression for hall coefficient	5
b)	A HWR with a load of 1K rectifies an ac of 325V peak value. Calculate (i) Peak current (ii) dc current (iii) rms Value of Current (iv) ripple factor	5
12	Draw the circuit diagram of an NPN Junction transistor CE configuration and describe its input and output characteristics	10
13 a)	Draw the block diagram of an amplifier with feedback Explain	5
b)	Explain the operation of crystal oscillator	5
14	Explain any two applications of OP-AMPs with neat Circuit diagrams	10
15 a)	Explain the working of LVDT	5
b)	Compare LED and LCD	5
16 a)	Explain the operation of a Bridge rectifier	5
b)	Explain the significance of NAND and NOR gates	5
17	Write short notes on i) Zener Voltage regulator ii) UJT	(5+5)

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