B. Tech. Sem - III (Production Engg.) (2014 COURSE) (CBCS) :
SUMMER - 2019
SUBJECT: BASIC ELECTRONICS AND COMMUNICATION ENGINEERING

Day: Saturday   Time: 02.30 PM TO 05.30 PM
Date: 11/05/2019   S-2019-2581   Max Marks: 60

N.B.:
1) All questions are **COMPULSORY**.
2) Figures to the right indicate **FULL** marks.
3) Draw neat and labeled diagrams **WHEREVER** necessary.
4) Use of non-programmable **CALCULATOR** is allowed.

Q. 1	**a)**	Draw and explain V-I characteristics of Zener Diode.	**(05)**
	b)	Write in brief on FET.	**(05)**

OR

	a)	Write in brief on Inductors and their types.	**(05)**
	b)	Compare CB, CC and CE circuits.	**(05)**

Q.2	**a)**	With the help of block diagram explain OP-AMP.	**(05)**
	b)	Write in brief on LED.	**(05)**

OR

	Write in brief on rectifier. Also compare half wave and full wave rectifier.	**(10)**

Q.3	What is number system? Divide $(110101)_2$ by $(1011)_2$, multiply $(1111)_2$ by $(1111)_2$ and multiply $(110101)_2$ by $(1111)_2$ using basic rules of binary Division and multiplication.	**(10)**

OR

	a)	Write in brief on universal gates.	**(05)**
	b)	Compare combinational and sequential circuits.	**(05)**

Q.4	**a)**	Compare AM and FM.	**(05)**
	b)	Write in brief on amplitude Modulation.	**(05)**

OR

	With the help of block diagram explain analog communication system.	**(10)**

Q.5	**a)**	What are the steps of sampling?	**(05)**
	b)	Explain pulse code modulation.	**(05)**

OR

	a)	Compare delta modulation and adaptive delta modulation	**(05)**
	b)	Define digital communication system and draw block diagram of digital communication system.	**(05)**

Q.6	**a)**	What are the various registers in 8085?	**(05)**
	b)	Draw the architecture of 8085 microprocessor.	**(05)**

OR

	a)	Write in brief on interrupts in 8085 microprocessor.	**(05)**
	b)	What is address bus and control bus?	**(05)**

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