B. TECH. SEM - III (PRODUCTION ENGG.) (2014 COURSE) (CBCS) : WINTER - 2017

SUBJECT: BASIC ELECTRONICS COMMUNICATION ENGINEERING

Day: **Monday**   Time: **10.00 AM TO   01.00 PM**

Date: **15/01/2018**   **W-2017-2052**   Max. Marks: 60

N.B.:

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

Q.1	**a)**	Why is colour coding used in resistor? Briefly explain its significance.	**(04)**
	b)	What is meant by resistance? Describe the various types of fixed resistor.	**(06)**

OR

Q.1	**a)**	Draw construction and characteristics of PN junction diode.	**(06)**
	b)	Draw and explain I/P characteristics of transistor in CB configuration.	**(04)**

Q.2		Draw the circuit diagram of full wave rectifier. Explain the operation with waveform.	**(10)**

OR

Q.2	**a)**	Draw and explain construction of FET.	**(06)**
	b)	Give the applications of LED.	**(04)**

Q.3	What do you mean by the following logic operation?	**(10)**

i) AND   ii) OR   iii) NOT
iv) NAND   v) NOR   vi) X- OR

OR

Q.3	**a)**	Subtract the following binary numbers:	**(06)**

i) 1011-101   ii) 10110- 1011   iii) 1100.10- 111.01.

	b)	Convert the decimal to binary:	**(04)**

i) 37   ii) 197.56

Q.4	Explain the detail basic communication system with block diagram.	**(10)**

OR

Q.4	What is frequency modulation? Discuss FM with neat figures.	**(10)**

Q.5	**a)**	How would you compare PCM system with delta modulation system?	**(06)**
	b)	Give the concept of delta modulation.	**(04)**

OR

Q.5	Explain in detail about the operation of PCM transmitter and receiver.	**(10)**

Q.6	Draw and explain architectures of 8085 microprocessor.	**(10)**

OR

Q.6	**a)**	Draw and explain interrupt structure of 8085.	**(06)**
	b)	Describe the following instruction:	**(04)**

i) CMA   ii) RLC