

Seat	
No.	

## F.E. (Semester – II) Examination, 2014 BASIC ELECTRONICS ENGINEERING (Old) (2008 Course)

Time: 2 Hours Max. Marks: 50

	Instructions: 1) Answer Q.T or Q.2, Q.3 or Q.4, Q.5 or Q.6. 2) Answer all questions in same answer book. 3) Neat diagrams must be drawn wherever necessary. 4) Figures to the right side indicate full marks. 5) Use of calculator is allowed. 6) Assume suitable data if necessary.	
1.	a) Write a note on : Seven segment display.	
	b) Draw and explain forward and reverse characteristics of Zener diode.	4
	c) Compare SCR and TRIAC.  OR	8
2.	a) In a center tap full wave rectifier, the rms half secondary voltage is 9 v. Assuming ideal diodes and load resistance $R_L = 1  k\Omega$ . Find (i) peak current (ii) DC load voltage (iii) RMS current iv) Ripple factor.	8
	b) Sketch the I-V characteristics of SCR.	2
	c) Compare CE, CB configuration.	6
3.	a) Draw and explain non-inverting amplifier using op-amp.	6
	b) State and prove the Demorgan's theorems.	4
	c) What do you mean by counter? Compare synchronous and asynchronous counter.  OR	
4.	a) Give comparison between Microprocessor and Microcontroller.	6
	b) Explain the ideal Op-Amp characteristics.	6
	c) Draw and explain the NAND and NOR gates with truth table.	4
5.	a) What is a transducer ? State important factors for transducer selection.	6
	b) Compare AM and FM.	6
	c) Write a short note on PLC.  OR	6
6.	a) What is modulation? Why it is necessary? Explain.	6
	b) Write a note on : LVDT (displacement transducer).	6
	c) Explain Electronic Weighing Machine with block diagram.	6

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