## 

### Seat No.

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

Time	2 Hours Max. Mark	ks : 50
	<ul> <li>Instructions : 1) Answer Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6.</li> <li>2) Answer all questions in same answer book.</li> <li>3) Neat diagrams must be drawn wherever necessary.</li> <li>4) Figures to the right side indicate full marks.</li> <li>5) Use of calculator is allowed.</li> <li>6) Assume suitable data if necessary.</li> </ul>	
1.	a) Write a note on : Seven segment display.	4
	<ul> <li>Draw and explain forward and reverse characteristics of Zener diode.</li> </ul>	4
	c) Compare SCR and TRIAC.	8
	OR	
2.	a) In a center tap full wave rectifier, the rms half secondary voltage is 9 v. Assuming idea diodes and load resistance $R_L = 1 k\Omega$ . Find (i) peak current (ii) DC load voltage (iii) RMS current iv) Ripple factor.	al S <b>8</b>
	<ul> <li>Sketch the I-V characteristics of SCR.</li> </ul>	2
	c) Compare CE, CB configuration.	6
3.	a) Draw and explain non-inverting amplifier using op-amp.	6
	<li>b) State and prove the Demorgan's theorems.</li>	4
	c) What do you mean by counter ? Compare synchronous and asynchronous counter.	6
4.	a) Give comparison between Microprocessor and Microcontroller.	6
	<ul> <li>Explain the ideal Op-Amp characteristics.</li> </ul>	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.	6
	OR	
6.	a) What is modulation ? Why it is necessary ? Explain.	6
	<li>b) Write a note on : LVDT (displacement transducer).</li>	6
	c) Explain Electronic Weighing Machine with block diagram.	6
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