



[4656] – 25

Seat No.	
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**F.E. (Semester – II) Examination, 2014
BASIC ELECTRONICS ENGINEERING
(Old) (2008 Course)**

Time : 2 Hours

Max. Marks : 50

- Instructions :** 1) Answer Q.1 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. 4
b) Draw and explain forward and reverse characteristics of Zener diode. 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 ideal diodes and load resistance $R_L = 1 \text{ k}\Omega$. 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. 6

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. 6

OR
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