CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (Autonomous)
BE (CSE & & IT) II/IV I Sem (Suppl) Examination May – Jun 2016

Basic Electronics

Time: 3 Hours   **Max Marks:75**

Note: Answer all questions from **Section-A** at one place in the same order
        Answer any **five** questions from **Section-B**

Section - A (25 Marks)

1	Draw the V-I Characteristics of P-N Junction diode	(2)
2	Define PIV of P-N junction diode	(2)
3	List out the Zener Diode characteristics	(2)
4	Draw the h-parameter equivalent circuits for CE amplifier and label it	(3)
5	List out the properties of negative feedback amplifiers	(2)
6	Draw the RC Type- Phase shift oscillator and also write formula for the frequency of oscillations	(3)
7	Write the Practical characteristics of an OPAMP	(3)
8	Draw the basic gates with Universal gates	(3)
9	Draw the circuit and the characteristics of SCR	(2)
10	Differentiate between LED and LCD	(3)

Section - B (50 Marks)

11	(a)	Discuss the electric properties of Ge amd Si	(5)
	(b)	Draw and explain operation of the full wave Bridge rectifier	(5)
12	(a)	Derive the expressions for A_I, A_V, R_I, R_O of the CE Amplifier	(7)
	(b)	Explain the Zener break down mechanism	(3)
13	(a)	Explain the transfer characteristics of JFET	(5)
	(b)	Explain the effect of negative feedback on Input impedance and Output impedance	(5)
14	(a)	With neat block diagram, explain the RC-phase shift oscillator.	(5)
	(b)	Define the term Voltage regulation and explain the application as voltage regulator	(5)
15	(a)	Draw the circuit diagram of OPAMP integrator and Differentiator. Also derive the expressions for output?	(10)
16	(a)	State and prove Demorgan's Theorem	(5)
	(b)	Simplify and draw the logic diagram for the given expression	(5)

$$F = \overline{ABC} + \overline{A}\overline{B}C + \overline{A}B\overline{C} + A\overline{B}\overline{C} + A\overline{B}\,\overline{C}.$$

17	(a)	Explain about the classification of transducers	(5)
	(b)	Explain about UJT Relaxation Oscillator	(5)

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