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B.E. DEGREE END SEMESTER EXAMINATIONS, NOV / DEC 2013

Geo Informatics

Second semester

EC9168 – BASIC ELECTRONICS ENGINEERING (R-2008)

Time: 3 hr

Max. Marks: 100

Answer ALL Questions

Part – A (10 x 2 = 20 Marks)

1. What is meant by intrinsic and extrinsic semiconductor?
2. Draw the V-I characteristics of PN junction diode.
3. Find the value of α , when $I_C=8.2\text{mA}$ and $I_E=8.7\text{mA}$.
4. What is the need of Transistor biasing?
5. Write the characteristics of FET.
6. Mention the applications of UJT.
7. Draw the Adder circuit using Op-amp.
8. What are the different types of Multivibrators?
9. What is Multiplexer?
10. Give the importance of Digital circuits.

Part – B (5 x 16 = 80 Marks)

11. (i) Explain the Half Adder and Full Adder with truth table (12)
- (ii) Write short notes about the use of Decoder in digital circuits. (4)

12. (a) Draw a input and output characteristics of CE transistor and explain. (16)

(OR)

12. (b) Draw the Voltage divider bias circuit and derive the stability factor (16)

13. (a). Explain the construction, operation and I-V characteristics of SCR. (16)

(OR)

- 13.(b) Explain the transfer and drain characteristics of FET with neat diagram. (16)

14. (a) Draw the circuit diagram of a RC phase shift oscillator using BJT. Derive the expression for frequency of oscillation. (16)

(OR)

14. (b) Explain the following (i) Integrator (8)
- (ii) Differential amplifier (8)

- 15.(a) Explain the following. (i) Avalanche breakdown (8)
- (ii) Zener diode as a regulator (8)

(OR)

- 15.(b) Explain the ful wave rectifier and derive the ripple factor for with and without filters. (16)