

Register Number

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B.E/B.Tech (Full Time) DEGREE END SEMESTER EXAMINATIONS, NOV/DEC 2011
GEOINFORMATICS
SECOND SEMESTER (REGULATION 2008)
EC 9168 BASIC ELECTRONIC ENGINEERING

Time : 3 Hrs

Max. Mark :100

Answer ALL Questions

PART-A

(10 x 2 = 20 Marks)

1. Draw the VI characteristics of a PN junction diode.
2. Draw the circuit symbol for a TRIAC.
3. Give the schematic of voltage control using SCR.
4. State the condition for sustained oscillation.
5. What are the characteristics of an ideal OPAMP (Operational Amplifier)?
6. List out the types of digital to analog converters.
7. Differentiate between minterms and maxterms.
8. What is meant by universal gate?
9. What is a transducer?
10. List out the practical applications of LED (Light Emitting Diode).

PART-B

(5 x 16 = 80 Marks)

- 11.(i) Draw the circuit diagram of a RC phase shift oscillator and explain its working principle. (8)
- (ii) With a neat diagram, explain the operation of depletion type MOSFET. (8)
- 12.a)(i) With neat sketches, explain the operation of SCR (Silicon Controlled Rectifier). (10)
- (ii) Write a brief note on Switched mode regulator. (6)
- (OR)
- 12.b)(i) With a neat diagram, explain the operation of a full wave rectifier with a capacitor filter. (8)
- (ii) Draw and explain the input-output characteristics of a BJT in common emitter configuration. (8)
- 13.a)(i) Explain the working of R—2R ladder type digital to analog converter. (8)
- (ii) With neat diagram, explain the operation of integrator and differentiator using operational amplifier (OPAMP). (8)
- (OR)
- 13.b)(i) Explain the working of successive approximation type analog to digital converter. (8)
- (ii) Explain the working of a 555 timer circuit as a mono-stable multi vibrator. (8)
- 14.a)(i) Design, draw the logic diagram and explain the working of a full subtractor. (8)
- (ii) With neat sketches, explain in detail the operation of a JK flip flop. (8)
- (OR)
- 14.b)(i) With a neat circuit and timing diagram, explain the working of 4-bit ring counter. (8)
- (ii) Briefly explain how the bits are shifted serially from the input to the output using a 4-bit shift register. (8)
- 15.a) With a neat diagram, explain in detail the construction and working principle of LVDT (Linear Variable Displacement Transducer). (16)
- (OR)
- 15.b)(i) With neat sketches, explain in detail the operation of different types of LCD's (Liquid Crystal Display). (12)
- (ii) Bring out the difference between LED and LCD. (4)