Code No. 4213/N

FACULTY OF ENGINEERING

B.E. 2/4 (CSE) I Semester Suppl. Examination

May/June - 2008

Subject : Basic Electronics

Time : 3 hours] [Max. Marks : 75

Note : Answer ***all*** questions of Part-A
Answer ***five*** questions from Part-B.

PART - A (25 marks)

1. Define fermi level. 3

2. Explain Hall effect and its significance. 3

3. Justify the name 'hybrid parameters'. 2

4. Which of the oscillator circuit is most stable ? Explain its circuit separation in brief. 3

5. What is the significance of gain bandwidth product ? 2

6. Explain in how many ways logic 1 can be defined ? 3

7. Define Peak Inverse voltage of a diode and give some typical values. 2

8. What are the limitations of RC type oscillators ? 3

9. What is the function of a trigger in CRO ? 2

10. Define gage factor of a strain gage. 2

PART - B (5×10=50 marks)

11. (a) Explain the difference between diffusion and drift current. 3

(b) Explain the operation of a p-n junction arrive of its characteristics. 5

(c) How zener diode is different from a silicon diode, in respect of doping levels ? 2

12. (a) Compare the advantages and disadvantages of FET and BJT. 3

(b) Explain the operation and characteristics of a zenar diode regulator. 7

13. (a) Classify negative feedback amplifiers and compare their performance in a tabular column. Show their ideal circuits. 8

(b) Explain Barkhansen's criteria of oscillations. 2

14. (a) Distinguish between the specifications of an Operational amplifier and an Instrumentation amplifier. 5

(b) Explain the circuit of Instrumentation amplifier. 5

15. (a) Explain the operation of LVDT and mention its applications. 5

(b) Compare LED and LCD displays, explaining the circuit of one of them. 5

16. (a) Derive for ripple factor of a FWR and HWR. Define regulation. 5

(b) Explain the operation of a simple inverter circuit. 5

17. Write notes on :

(a) Transistorized IC regulator

(b) Silicon Controlled Rectifier

(c) Lissajous figures
