

003015

Roll No.

Y-2247

B. Sc. (Part III) EXAMINATION, 2015

INFORMATION TECHNOLOGY

Paper First

(Amplifiers and Oscillators)

Time : Three Hours]

[Maximum Marks : 50

Note : Attempt any *two* questions from each Unit. All questions carry equal marks.

Unit—I

1. (a) Draw a neat diagram of single ended class A power amplifier and explain it.
- (b) Write down the various advantages of push-pull amplifier.
- (c) What are the requirements of power amplifiers ?

Unit—II

2. (a) What do you mean by feedback in amplifiers ? Describe various types of feedback in brief.
- (b) Draw and explain Hartley oscillator in brief.
- (c) Draw a neat diagram of monostable multivibrator and explain it.

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Unit—III

3. (a) What is OP-AMP ? Write down the various characteristics of ideal OP-AMP.
- (b) What is SCR ? Explain I-V characteristics of SCR in brief.
- (c) Draw and explain OP-AMP as a voltage follower circuit in brief.

Unit—IV

4. (a) Draw a pin-diagram of 8085 μ p. Describe various important signals of 8085 μ p in brief.
- (b) What do you mean by addressing mode ? Describe any *three* addressing modes with suitable examples.
- (c) Describe various arithmetic instructions of 8085 μ p with proper syntax.

Unit—V

5. (a) Write an assembly language program to add ten values which are stored from memory location Co50 to Co59. Store sum and carry into memory location starting from Do70.
- (b) Distinguish between CALL-RE and PUSH-POP instructions with proper examples.
- (c) Write an 8085 program to simulate a decimal upcounter to count 00 to 99. Use delay of 100 msec in between counts. Assume the operating frequency as 2 MHz.

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