

Code: 9A10504

R9

B.Tech III Year I Semester (R09) Supplementary Examinations, May 2013

LINEAR AND DIGITAL IC APPLICATIONS

(Common to E.Con.E, EIE and ECC)

Time: 3 hours

Max Marks: 70

Answer any FIVE questions
All questions carry equal marks

- 1 (a) Explain in detail all the DC and AC characteristics of an ideal OP-AMP with relevant expressions.
(b) What are the features of IC 741?
- 2 (a) Derive the expression of the output voltage of an antilog amplifier using op-amp.
(b) Describe the principle of operating of a precision half wave rectifier with waveforms.
- 3 Draw the circuit and explain the working of:
(a) Voltage to current converter.
(b) Current to voltage converter.
- 4 (a) Draw the circuit of Schmitt trigger using 555 timer and explain its operation.
(b) Explain the operation of astable multivibrator using 555 timer.
- 5 Explain block schematic of PLL and list the applications of PLL.
- 6 (a) What is meant by Tristate logic? Draw the circuit of Tristate TTL logic and explain the functions.
(b) List out the advantages of CMOS logic.
- 7 (a) Write the detail about HOL and VHDL.
(b) Explain various operations in verilog HDL.
- 8 (a) Explain about SR latch with example.
(b) Design a 4-bit bidirectional shift register with parallel load.
