

Code No: **R31026****R10****Set No. 1****III B.Tech I Semester Supplementary Examinations, November - 2015****LINEAR & DIGITAL IC APPLICATION****(Electrical and Electronics Engineering)****Time: 3 hours****Max. Marks: 75****Answer any FIVE Questions****All Questions carry equal marks**

- 1 a) Define Integrated Circuit. Explain the different types of IC's. [8]
b) Discuss about DC analysis of dual input balanced output amplifier. [7]
- 2 a) Define amplifier. Enlist the characteristics of Op-amps [7]
b) Explain the terms CMMR, PSRR, slew rates and offset voltages of Op-amp. [8]
- 3 a) Draw and explain the triangular wave generator by using Op-amp. [7]
b) Draw the anti log amplifiers by using Op-amp and explain its operation. [8]
- 4 a) Draw the block diagram of PLL and explain its operation. [7]
b) Draw and explain the functional diagram of 555 timer [8]
- 5 a) Draw the inverted R-2R OAC and explain its operation. [8]
b) Draw the successive approximation ADC and explain its operation. [7]
- 6 a) Explain about Multiplexers and Demultiplexers with example. [8]
b) Explain the Ripple Adder and Binary Parallel Adder [7]
- 7 a) What is meant by sequential logic design? Explain about Latches and flip-flops with suitable examples. [10]
b) Explain the JK flip flop circuit diagram. [5]
- 8 Discuss about the following with examples. [15]
(i) Programmable Logic Array (ii) Programmable Array Logic Devices.
