

Lib

(3 Hours)

Total Marks: 80

- N.B.: (1) Question No.1 is compulsory.
(2) Solve any three questions from remaining five questions.
(3) Draw neat diagrams and assume suitable data wherever necessary. Justify your assumptions.

1. Attempt any four questions. 20
 - (a) Explain op-amp as inverting amplifier.
 - (b) Explain the concept of virtual short and virtual ground.
 - (c) Explain features of IC 723.
 - (d) Explain the Principle of oscillator.
 - (e) Enlist merits and demerits of active filters.
 - (f) Explain op-amp amplifier in closed loop configuration.

2.
 - (a) Explain the operation of IC 555 as astable multivibrator. 10
 - (b) Explain the working of binary weighted resistor DAC 10

3.
 - (a) Explain sample and hold circuit with wave forms. 8
 - (b) Explain the operation of voltage to current converter 6
 - (c) Explain in detail the working of LM337 Voltage Regulator 6

4.
 - (a) Explain the Operation of dual slope ADC in detail. 10
 - (b) Explain op-amp as sample and hold circuit. 5
 - (c) Explain the working of VCO IC 566 5

5.
 - (a) Explain the working of operational amplifier as differentiator. 10
 - (b) Explain in details the operation of inverting Schmitt trigger. 10

6. Write short note on any four from following: 20
 - (a) Effect of negative feedback on frequency response.
 - (b) Classification of filters
 - (c) Instrumentation amplifier
 - (d) LT1070 Monolithic switching regulator.
 - (e) PLL IC 565