

Date! - 6/6/2012

Sem! - Vth (R6)

Bio-med - DAC - 04

Branch! - Bio-Med

78-1st Half-12 min (f)

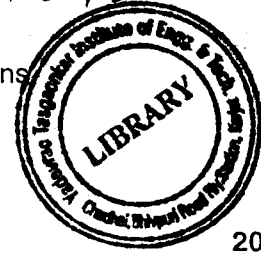
Con. 4744-12.

Sub! - DAC

GN-9365

YTIET/UB/ENGG/BM/sem-V/DAC/6 Jun. 2012 (3 Hours) [Total Marks : 100]

- N. B. : (1) Question No. 1 is compulsory.
(2) Attempt any four questions out of remaining six questions.
(3) Support answers with diagrams if necessary.
(4) Marks to right indicates full marks.
(5) Assume data if necessary.



1. (a) Draw and explain Sample and Hold Circuit. 20
(b) List the advantages of Active filter over Passive filter.
(c) Explain the use of pin 2 and pin 5 in IC 555.
(d) Explain Lock range and capture range in PLL.
2. (a) Derive the gain formula in 3 OP-AMP Instrumentation Amplifier. Design the above circuit for gain 900. 12
(b) List the op-amp parameters with its ideal and practical values. 8
3. (a) Explain the IC 555 in Monostable Mode and derive the expression for T. 10
(b) Design the Astable multivibrator for duty cycle of 60% for frequency = 3 kHz. 10
4. (a) Explain KRC Filters. 12
(b) Design a 2nd order High pass filter for frequency 150 Hz. 8
5. (a) Draw and explain PLL. 10
(b) Explain the Missing pulse detector using IC 555. 10
6. (a) Draw and explain voltage controlled Oscillator. 10
(b) Explain voltage to frequency convertor. 10
7. Attempt any four :— 20
 - (a) Explain any circuit use to minimize input offset voltage in op-amp
 - (b) Frequency to voltage convertor
 - (c) Explain any one application of PLL
 - (d) Schmitt trigger
 - (e) Negative impedance convertor.