

Course Code: 4MSCP

Course: communication electronics

Credit: 3

Last Submission Date: October 31 (for January Session)

April 30, (for July session)

Max. Marks:-30

Min. Marks:-11

Note:-attempt all questions.

- Que.1 What is an SR flip –flop? Give its logic symbol, truth table and circuit realization using Nor/ NAND gates.
- Que.2 (i) What is the advantage of using binary number system in a digital electronics  
(ii) Subtract  $(1010)_2$  from  $(1101)_2$  by 1's complement method.
- Que.3 What is an operational amplifier? Mention a few applications of operational amplifier.
- Que.4 What is the common –mode rejection ratio ( CMRR) of an operational amplifier? what is slew rate?
- Que.5 Explain how an operational amplifier may be used as:-  
(i) Adder ( summing)  
(ii) Scaling  
(iii) Differentiator  
(iv) Integrator
- Que.6 With the help of a circuit diagram explain the operation of a phase shift oscillator and find its frequency of oscillation.
- Que.7 Discuss the generation of delta modulation ? give advantages of Adaptive delta modulation.
- Que.8 Write short notes on :- (Any two)  
(i) Inverting amplifier  
(ii) SVRR  
(iii) Synchronous counters