QP CODE: 4205 (CBCS)

A3

PITHAPUR RAJAH'S GOVERNMENT COLLEGE (AUTONOMOUS), KAKINADA

IV -SEMESTER END EXAMINATIONS-MARCH-2020

II YR B.Sc., SUBJECT/ PAPER: ELECTRONICS

OP-AMP & DIGITAL IC APPLICATIONS

DATE: 01.04.2020(WEDNESDAY), TIME: 09.00 AM

Max. Marks: 60 | **Reg. No.** | | | | | | | | | **Duration: 2½ Hrs**

SECTION – A

Answer any three questions. 3x10=30M

1. Draw the circuit diagram of Inverting amplifier and explain their operation.
2. Explain the working and construction of sine wave generator using op-amp.
3. Explain the pin diagram of IC – 555 timer.
4. What is counter? Design and explain mod 16 counter.
5. Explain the working of A/D converter.

SECTION – B

Answer any Five Questions. 6x5=30M

6. How does op-amp act as a voltage follower?
7. Calculate the output voltage of an op-amp summing amplifier for the following set of voltages and resistors. Rf=10kΩ,v1= 6v,v2=3v,v3=0.8v,R1=10k Ω, R2=5kΩ, R3=6kΩ.
8. An Inverting amplifier has R1=10k Ω, Rf=125kΩ. Find the output voltage, the input resistance and input current for an input voltage 4 volt.
9. Explain the working of op-amp as comparator.
10. Write a short note on astablemultivibrator using IC 555 timer.
11. Draw and explain BCD to decimal decoder (IC7442).
12. Explain how op-amp as low pass filter.
13. Explain successive approximation of ADC.
14. Give breif explanation of single slope ADC.