

**(ELE 4303)**  
**B.Sc (MECS) Degree (CBCS) Examinations**  
MARCH - 2019  
EXAMINATION AT THE END OF IV SEMESTER  
PART-II  
**ANALOG AND DIGITAL IC-APPLICATIONS**

TIME : Two and half hours

Maximum : 60 Marks

**Part-A**

**Answer any Five Questions:**

**5 X 4 = 20M**

1. Explain virtual ground in OP-AMP.
2. Explain voltage to current converter.
3. Explain comparator circuit using OP-AMP.
4. Draw the block diagram of IC555.
5. How do you design to convert Gray numbers into binary?
6. Explain single delta ADC.
7. Give brief note on universal shift register.
8. Design the BCD code conversion from BCD code into binary code.
9. Write a short note on LED's.
10. Draw the circuit diagram of parallel to serial shift register.

**Part-B**

**Answer the following Questions:**

**5 X 8 = 40M**

11. Explain inverting amplifier circuit and deduce the expression for gain with feedback.  
(or)

Explain logarithmic amplifier with neat sketch.

12. Explain Astable multivibrator to generate square wave form.  
(or)

Explain monostable multivibrator to generate square wave form.

13. Design the code conversion from BCD code into seven segment code.  
(or)

Design 3 bit synchronous 3 bit up/down counter.

14. Explain successive approximation type ADC.  
(or)

Explain binary weighted D/A converter.

15. Explain digital clock with neat circuit diagram.  
(or)

Draw the circuit diagram of serial to parallel shift register and explain.