CSE-3105 (Microprocessors and Micro-controller)

Date: 06 August 2020

Topics of Lecture 33, Lecturer 34 and Lecture 35:

Q1. What is sampling? How sampling is performed using Analog to Digital Converter (ADC). Write with block diagram.

Q2. How sampling is performed on an analog signal? Write with an example.

Q3. What is aliasing effect? How can we remove it? Explain briefly.

Q4. What are the limitations of Digital Ramp ADC? What are the advantages of Successive Approximation ADC?

Q5. Explain the working principle of Successive Approximation ADC with flow chart.

Q6. Draw the timing diagram and operating procedure of Successive Approximation ADC of the following inputs:

(i) 10.4 Volts
(ii) 30.9 volts

Q7. An eight-bit SAC has a resolution of 20 mV. What will its digital output be for an analog input of 2.17 V?

Q8. Draw the pin-out diagram of ADC 0804 8-bit SAC. Also write the pin functions of each pin.

Q9. What is the working principle of Up/down Digital Ramp ADC? What are advantages of it?

Q10. Write some applications of ADC and DAC.