Printed Pages : 1 **Roll No.** | | | | | | | | | | | **EEC011**

B.TECH.

THEORY EXAMINATION (SEM–VI) 2016-17

ANALOG SIGNAL PROCESSING

Time : 3 Hours ***Max. Marks : 100***

Note : *Be precise in your answer. In case of numerical problem assume data wherever not provided.*

SECTION A

1 **Attempt all parts:** **(10X2=20)**

a. What do you understand by impedance?
b. Differentiate between digital and analog sugnal.
c. Explain filter with example.
d. What is biquads? Explain.
e. Explain signal rectification.
f. What do you mean by peak and valley?
g. Define transconductance.
h. What is grounded inductor?
i. Define voltage limiter circuit.
j. Define gyrator with example.

SECTION B

2 **Attempt any FIVE parts:** **(10X5=50)**

a. Discuss the differentiation and addition linear analog function with an example.
b. Write a note on the impedance transformation and conversion with an example.
c. Illustrate the process of signal rectification with using an appropriate example.
d. What do you mean by a logarithmic amplifier? Discuss.
e. Explain Notch and AP transfer functions with an example.
f. Describe the working of op-amp as an amplitude demodulator.
g. Write a note on the amplitude demodulation.
h. What do you mean by ladder design? Illustrate with an example.

SECTION C

Attempt any TWO questions: **(15X2=30)**

3. What do you understand by generalized convertor? Discuss it in detail using suitable example with the block diagram.
4. What are the methods for detecting peaks and valleys? Describe any methods for detecting peaks and valleys with an example.
5. Write detailed note on the following:
   a. C-filters.
   b. Voltage limiting.