

2016

M.Sc.

1st Semester Examination

ELECTRONICS

PAPER—ELC-106

(PRACTICAL)

Full Marks : 50

Time : 3 Hours

The figures in the right-hand margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Illustrate the answers wherever necessary.

Set — II

(Analog Circuit and Design Laboratory)

Answer any one question, selecting it by a lucky draw.

1. Design an active low pass filter (1st order) with following specifications :

Cut off frequency :

(Turn Over)

Gain :

Study the performance of the filter.

2. Design an active high pass filter (1st order) with following specifications :

Cut off frequency :

Gain :

Study the performance of the circuit.

3. Design a RC phase shift oscillator with following specifications :

Output frequency :

(to be supplied in exam. hall.)

Study its performance.

4. Design and study the performance of a 2nd order low pass filter with following specifications :

Cut off frequency :

Gain :

(to be supplied in exam. hall.)

5. Design and study the performance of a 2nd order high pass filter with following specifications :

Cut off frequency :

Gain :

(to be supplied in examination.)

6. Design an integrator. Take a function & study its performance in the circuit. Draw the transfer characteristics curve.
7. Design a differentiation using OPAMP. Take a function (signal) & study the performance of the circuit.
Draw the transfer characteristic curve.
8. Design a fixed bias transistorized amplifier & measure V_{BE} , V_{CE} , V_{CB} , I_C , I_B , I_E at Q-point.

Distribution of Marks

Theory	: 05 Marks
Circuit	: 10 Marks
Experiment	: 15 Marks
Results & Discussion	: 05 Marks
Viva-Voce	: 10 Marks
Laboratory Note Book	: 05 Marks
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Total	: 50 Marks
