

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 — I

(Analog Circuit and Design Laboratory)

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

1. Design a regulated power supply using OP-AMP as pass transistor with following specifications :

(Turn Over)

Output Current :

Output Voltage :

(Both are to be supplied during examination.)

2. Design a regulated power using power transmission as pass element & transistor as comparator with following specifications :

Output Current :

Output Voltage :

(to be supplied during examination.)

3. Design a CE amplifier with amplification gain of 100. Find the gain for the different input voltage. Draw its frequency response curve.

(The other specifications to design the amplifier will be supplied during examination.)

4. Design and study the performance of a a 1st order low pass passive filter having cut-off frequency : kHz.

(to be supplied during examination.)

5. Design and study the performance of a a 1st order high pass filter having cut-off frequency : kHz.

(to be supplied during examination.)

6. Design an integrator. Take a function and study its performance in the circuit. Draw the transfer characteristic curve.
7. 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
Total	: 50 Marks
