2017

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.

(Analog Circuit and Design Laboratory)

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

1. Design a fixed bias transistorised amplifier and measure V_{BE}, V_{CE}, V_{CB}, I_C, I_B, I_E at Q. Point.

2. Design an integrator using OPAMP. Take a function and study its performance in the circuit. Draw the transfer characteristics curve.

3. Design a differentiaton. using OPAMP. Take a function and study its performance. Draw the transfer characteristics curve.

4. Design a regulated power supply with following specifications. Output voltage : Current :

   (To be supplied in examination hall)

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

   Cut off freq :

   Gain :

   (To be supplied during examination)

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

   Cut off freq :

   Gain :

   (To be supplied in examination hall)

7. Design a regulated power supply using OPAMP as comparator

   Output voltage :

   Current :

   (To be supplied during examination)

8. *Design a p-c phase shift* oscillator with following specifications :

Output freq :

(To the supplied during examination.)

Study its performance.

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

Cut off freq :

Gain :

Study the performance of the filter.

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

Cut off freq :

Gain :

Study the performance of the circuit.

Distribution of Marks

Theory and Experiment	:	35 Marks
Viva-Voce	:	10 Marks
Laboratory Note Book	:	05 Marks
Total	:	50 Marks