PG/IS/ELC-106/19(Pr.)

## M.Sc. 1st Semester Examination, 2019

## ELECTRONICS

( *Analog circuit and design laboratory* )

(Practical )

PAPER —ELC-106

*Full Marks* : 50

*Time* : 3 hours

Answer any **one** question by selecting throgh **lucky draw**

1. Design an active low pass filter with the following specifications :
   Cutoff freg :- Gain :
   Study the performance of the circuit.

2. Design a regulated power supply with the following specifications :
   Output voltage : Current :
   (to the supplied during examination )

3. Design and study the performance of 2nd order low pass filter with following specifications.
   Cut-off frequency :-
   Gain :
   (to the supplied during examination )

4. Design an active high pass filter. (Ist order) with following specification.
   Cutoff frequency :-
   Gain :
   (to the supplied during examination )

5. Design an differential circuit using OP AMP. Take a function and study its performance. Draw the transfer characteristics curve.

6. Use OP AMP 60 design integrator. Take a function and study its performance in the circuit. Draw the transfer characteristic curve.

7. Design a regulated power supply using OP AMP as comparation.
   Outout voltage :
   Current :
   (to the supplied during examination )

8. Design a fixed biased transistorised circuit and measure $V_{CE}$, $V_{CB}$, $I_C$, $I_E$ at $Q$ point.

9. Design and study the performance of 2nd order high pass filter with folowing specifications.
   Cutoff frequency :-
   Gain :

10. Design a RC phase shift oscillator and study its per formance

frequency :

11. Design a self bias transis torised amplifier and measure $V_{BE}$, $V_{CE}$, $V_{CB}$, $I_C$, $I_B$, $I_E$ at $Q$ point. Repeat the same with different BJT.

## Distribution of Marks

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