

M.Sc. 3rd Semester Examination, 2010

ELECTRONICS

(Electronic and Optical Communication)

PAPER—EL-2112

(Practical)

Full Marks : 50

Time : 3 hours

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

1. Design an AM circuit using OTA 3080 IC. Test its operation on CRO for three. Modulating signal inputs having same frequency but different amplitudes. In each case calculate the values of modulating Index.

(Turn Over)

2. Design a frequency modulation circuit using IC 8038 and Implement it on a bread board. Test the operation of the circuit in CRO and calculate frequency deviation and modulation Index.

3. Design a circuit to generate PAM signal using a transistor. See the output wave form of the circuit on a CRO. Repeat it for two carrier signal frequency and two modulating signal amplitude. In all cases note down the amplitude and time period of all the pulses appeared on CRO screen.

4. Design a PWM circuit and plot a graph of signal voltage vs pulse width for two different carrier frequencies.

5. Use OTA 3080 I.C to design an AM circuit. Draw graph of modulating signal vs modulation index using the circuit.
6. Design a circuit for generating DSB-SC signal. Test the operation and observe the phase reversal in the DSB-SC output signal for the two different carrier frequency signal.

Theory	: 05
Circuit	: 10
Experiment	: 20
Results and Discussion	: 05
Viva-voce	: 05
L.N.B	: 05
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Total	: 50