End Semester Examination of Semester–I, 2015
Subject : COMPUTER SCIENCE (UG)
Paper : II(L2) (Basic Electronics Lab)
Full Marks : 25
Time : 3 Hrs

*The figures in the margin indicate the marks
corresponding to the question*

*Candidates are requested to give their answers
in their own word as far as practicable.
Illustrate the answers wherever necessary.*

Answer any one

Questions should be distributed on lottery basis

Experiment : 15 Marks

(Theory–5, Experiment–5, Result-5)

Viva : 5 Marks

CIA : 5 Marks

Total	:	25 Marks

1. Study the Reverse Bias characteristics of Zener diode. Plot V/I Curve. 15

2. Study the Forward biased characteristic of a silicon diode. Plot V/I curve. Find static and dynamic Resistance. 15

3. Design a Full-wave rectifier circuit. Find Ripple factor and Efficiency of rectifier. 15

4. Design a circuit for Load Regulation of Zener diode. Draw V_L/I_L graph. **15**

5. Design a Regulated Power supply which will give 6 V at output. Also find % of Regulation. **15**

6. Design a full wave Bridge-Rectified Circuit. Find ripple factor, % of regulation. **15**

7. Design a Inverting Amplifier using IC-741 to obtain the gain of 10. **15**

8. Design a non-inverting Amplifier of gain 3 using IC-741. **15**

9. Design a summing amplifier using IC-741. Show the outputs of following Input voltages : **15**

V_1	V_2	V_1+V_2
+1	−2	
+1	+2	
−2	−2	
−2	+1	
+2	+2	

10. Design an OP-Amp Integrator Circuit. Show the Input and Output waveform. **15**

11. Design an OP-AMP Differentiator Circuit. Show the Input and Output waveform. **15**

12. Design the following circuit and take the output.   15
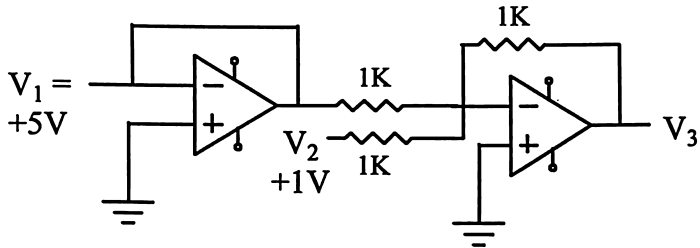

Fig. 1

13. Design a Astable multivibrator and calculate the frequency and Duty Cycle.   15