B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2012

Fifth Semester – Regulation 2008

Electrical and Electronics Engineering

EE9303 — LINEAR INTEGRATED CIRCUITS

Time : Three hours **Maximum : 100 marks**

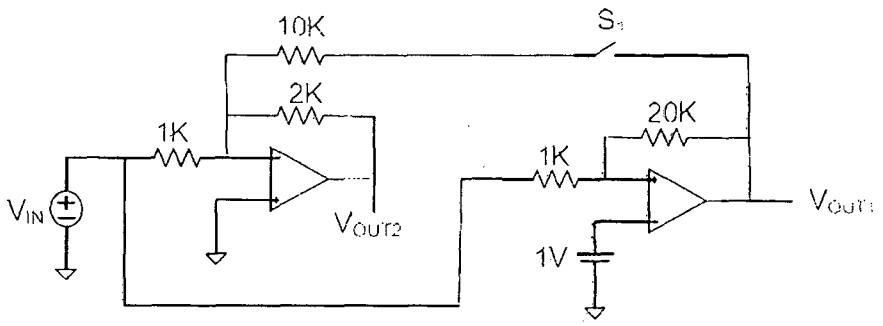
Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Why silicon is preferred in IC fabrication?.
2. What is the value of CMRR of IC741?
3. Draw the op-amp based circuit, whose output is V1 – V2 + V3 – V4.
4. Write the expression for resolution in n-bit DAC.
5. What are the requirements for producing sustained oscillations in feedback circuits?
6. Mention the advantages of active filter over passive filter?
7. What is the maximum output current that can be delivered by IC555.
8. Define Lock-in and capture range in PLL.
9. What is the purpose of having input and output capacitors in three terminal IC regulators?
10. What are the advantages of switching regulator over series regulator?

PART B — (5 × 16 = 80 marks)

11. For the circuit shown below, determine VOUT1 and VOUT2 when S1 is open and close. The VIN is a 1Hz triangular waveform with peak maximum and minimum values of +2V and -2V respectively. Assume the op amps are biased with ± 10V and that the positive and negative saturation voltages of the op amp are ± 10V as well.



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