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JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST 1 EXAMINATIONS – Sep 2018

ECE 5th Semester

COURSE CODE: 17B11EC511 MAX. MARKS: 15

COURSE NAME: Linear Integrated Circuit

COURSE CREDITS: 04 MAX. TIME: 1 HRS

Note: *All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means. Assume any missing data.*

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1. (a). Draw the pin diagram of IC 741. (1)

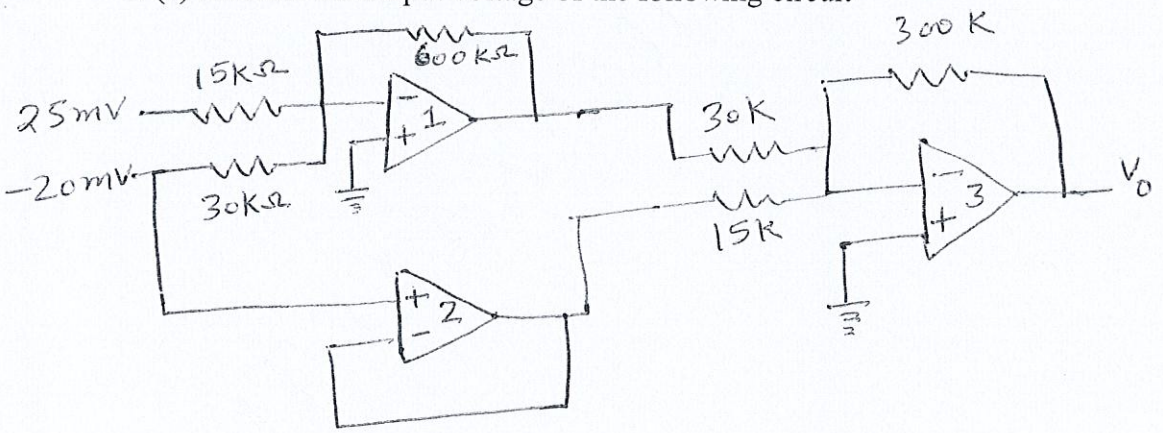
   (b). Write down the characteristics of ideal operational amplifier. (2)

   (c). Define input off set voltage and output off set voltage. (2)

2. (a). Derive the expression of voltage gain for non inverting amplifier with feedback. (2.5)

   (b). Draw the circuit diagram of Logarithmic amplifier using IC 741 and show that the output of the logarithmic amplifier is proportional to the log of the input voltage. (2.5)

3. (a) Find out the output voltage of the following circuit- (2)



   (b). Design an input offset voltage compensating network for the given circuit. Op-amp is IC μA715 with v_{io} = 5mV maximum and supply voltages are +15volt and -15volt. Draw the complete circuit diagram. (3)