Dayananda Sagar College of Engineering

Department of Electronics and Communication Engineering

ShavigeMalleshwara Hills, Kumaraswamy Layout, Bangalore – 560 078.

(An Autonomous Institute affiliated to VTU, Approved by AICTE & ISO 9001:2008 Certified)

Accredited by National Assessment and Accreditation Council (NAAC) with 'A' grade

ASSIGNMENT

Subject: LIC&A Sub Code: 18EC4DCLIC

Assignment display date: 29/3/2020 Assignment Submission date: 15/4/2020

Faculty name: RS, KNP, MNP, DKS SEM: IV A B C D

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1. A capacitor coupled ZCD is to handle a 2 KHz square wave with peak to peak amplitude of 10v. Design a circuit using 741 opamp with a supply of ±15v. Estimate the minimum opamp slew rate to give a reasonable undistorted output. Also calculate lowest sine wave frequency that can be applied without the phase shift error exceeds 3°. Given V_B =0.1V ,I_B (max) =500nA

2. Explain Switching Mode power supply (SMPS) and dual slope ADC.

3. Explain frequency doubling in multiplier and frequency and duty cycle adjustment in waveform generator circuit

4. Design LED temperature indicator using 555 timer

NOTE : EACH QUESTION CARRIES 10 MARKS EACH