

IEEE Sri Lanka Section Electronic Design Competition

Round 1

Task 1

Task Description

You must design a logic circuit for a digital clock with 6 seven segment displays: 2 for hours, 2 for minutes and 2 for seconds. The clock must have a switch/button to switch between 12 hour and 24 hours timing modes. A time-set function must be available to change the time setting. You may use adequate method of input for time set function.

Rules

- Programmable microcontrollers are not allowed.
- Composite timer modules (ICs) are not allowed to be used. Core clock logic must be developed using logic gates and flip-flops.
- An oscillator must be used as the frequency source of the circuit. Don't rely on external function generators.
- The circuit must be developed using Multisim or Proteus simulation tools.

Task 2

Task Description

Design a common emitter amplifier with an emitter resistance having a gain of 100. You should place voltmeters and ammeters through the input and the output.

Rules

- The circuit must be developed using Multisim or Proteus simulation tools.

Inquiries:

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