

S.B. Roll No.....

ELECTRONIC DEVICES AND CIRCUITS
3RD Exam/ECE/ETV/ECEII/0616/0361/May'17

Duration: 3 Hrs.

M.Marks:75

SECTION-A

Q1. Do as directed:

1x15=15

- a. Photo diode operate under _____ biased condition.
- b. CMRR stands for _____ .
- c. Unit of gain is _____.
- d. At resonance in series RLC circuit, impedance $Z=$ _____.
- e. Negative clamper circuit shifts the waveform towards negative side.(T/F)
- f. IC 555 is _____ number of pins IC.
- g. Ideal operational amplifier has infinite input resistance and zero output resistance.(T/F)
- h. LED's can emits only red light.(T/F)
- i. An op-amp has _____ number of inputs
- j. IC 7805 is _____ voltage regulator.
- k. The resistance of photo resistor _____ with light.
- l. _____ multivibrator can be used as delay circuit.
- m. Direct coupling amplifier can be used as _____.
- n. For class C amplifier, collector current flows for _____ cycle only.
- o. Oscillators use _____ feedback.

SECTION-B

Q2. Attempt any five Questions.

5x6=30

- i. Why multistage amplifier is required in practical circuits?
- ii. Draw a diagram for SMPS and explain its working.
- iii. Explain single ended power amplifier.
- iv. Define the characteristics of ideal Op-amp
- v. How negative feedbacks in amplifier effect the stability and gain?
- vi. Write a note on VCO.
- vii. Discuss the principle of photo diode.
- viii. Discuss the basic concept of clipper circuits.

SECTION- C

Q3. Attempt any three Questions.

3x10=30

- I. What is a barkhausen criteria? Explain Hartley oscillator.
- II. Explain IC 555 timer as monostable multivibrator with diagram.
- III. Explain R-C coupled multistage amplifier with the help of diagram. Write down its application.
- IV. Describe the working of push-pull amplifier using circuit diagram
- V. How can we use operational amplifier as integrator and differentiator?