

VITHALBHAI PATEL & RAJRATNA P.T. PATEL SCIENCE COLLEGE
VALLABH VIDHYA NAGAR

S.Y. B.Sc. SEM: IV
SUB: INSTRUMENTATION (VOC.)
SUB CODE: US04CINV02

INTERNAL TEST

DATE: 14th March. 2015
TIME: 10:30 pm to 12:00 pm
TOTAL MARKS: 25

- Q. 1 Choose the correct answer.** [03]
- (1) In L-C oscillator frequency can be varies by changing in value of _____ .
(A) Inductor (C) Capacitor
(B) Inductor and capacitor both (D) None of above
- (2) Normally in LASER _____ and in LED _____ emission occurs.
(A) Stimulation, spontaneous (C) Spontaneous, stimulation
(B) Spontaneous, Absorption (D) Stimulation, Absorption
- (3) In fiber optics light propagate through total internal _____ .
(A) Total internal reflection (C) Total refraction
(B) Total scattering (D) None of above
- Q.2 Answer the following in short.(Attempt any two, each two marks)** [04]
- (1) State both Barkhausen's criteria and explain in short.
(2) Enlist difference between LED and LASER.
(3) Explain principle of fiber optics.
- Q.3 Explain Astable multi-vibrator using 555 block diagram** [06]
OR
- Q.3 Write a note on Wein bridge oscillator.** [06]
- Q.4 List different types of laser lancing mediums and lasers. Explain Ruby Lasers in detail** [06]
OR
- Q.4 List types of Led and explain surface emitting Led in detail with schematic diagram.** [06]
- Q.5 Describe Avalanche photo detector.** [06]
OR
- Q. 5 Discuss fiber optics construction.** [06]



--:All the best:--