

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

S.Y. B.Sc. SEM: IV

INTERNAL TEST

DATE: 14th March. 2015

SUB: INSTRUMENTATION (VOC.)

TIME: 10:30 pm to 12:00 pm

SUB CODE: US04CINV02

TOTAL MARKS: 25

Q. 1 Choose the correct answer.

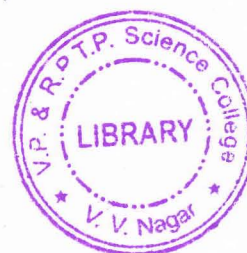
[03]

- (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:-