

V.P. & R.P.T.P SCIENCE COLLEGE
INTERANAL EXAMINATION
S.Y.B.Sc (4TH-SEMESTER) INSTRUMENTATION (VOC.)

SUB : - OSCILLATORS AND OPTICAL DEVICES

SUB.CODE :- US04CINV02

DATE :- 08/03/2017

TIME :- 3.00 P.M TO 4.30 P.M.

MARKS-25

Q-1 Choose correct answer.

[3]

1. In phase shift oscillator feedback R-C circuit gives total _____ degree of phase shift.
(A) 90 (C) 210
(B) 180 (D) 270
2. _____ laser use as cutting application in industries because of its high output power.
(A) CO₂ (C) He-Ne
(B) Ruby (D) None of these
3. In fiber optics light propagate through total internal _____.
(A) Refraction (C) Reflection
(B) Diffraction (D) Scattering



Q-2 Short answer type questions. (attempt any two)

[4]

1. What is piezoelectric effect ? Briefly explain its equivalent circuit.
2. Write difference between LED and LASER.
3. Enlist advantages and disadvantages of fiber optics.

Q-3 What is oscillator ? List different types of oscillator and explain any one L-C oscillator in detail. **[6]**

OR

Q-3 Draw the block diagram of 555 Timer IC. Discuss Astable multivibrator using 555 IC with neat diagram. **[6]**

Q-4 List different types of LED and explain Surface Emitting Led in detail with neat diagram. **[6]**

OR

Q-4 Enlist different types of applications of laser and discuss any two applications in detail. **[6]**

Q-5 What is photo detector ? List different types of photo detectors and explain any one detector in detail with neat diagram. **[6]**

OR

Q-5 Give comparison of metal cable with fiber optic cable in detail. **[6]**

*****Best of luck*****