



V.P. & R.P.T.P SCIENCE COLLEGE  
INTERANAL EXAM-2018  
S.Y.B.Sc. (SEM-IV) INSTRUMENTATION (VOC.)

SUB. CODE:-US04CINV02

DATE:-14/03/2018

TIME:-3:00 PM to 4:30 PM

MARKS-25

**Q-1 Choose correct answer [3]**

1. The phase shift oscillator feedback RC circuit gives total \_\_\_\_\_ degree of phase shift.  
(A) 75 (C) 270  
(B) 180 (D) none of above
2. \_\_\_\_\_ laser use as cutting application in industries because of its high output power.  
(A) Ruby (C) He-Ne  
(B) CO<sub>2</sub> (D) none of above
3. \_\_\_\_\_ is type of optical detector.  
(A) PN (C) resistance  
(B) PIN (D) none of above

**Q-2 Short answer type question.(attempt any two) [4]**

1. What is oscillator? Explain briefly.
2. Write difference between LED and LASER.
3. Enlist advantage and disadvantage of fiber optics.

**Q-3 Explain block diagram of 555 timer IC with function of each pin. [6]**

OR

**Q-3 List different types of oscillator and explain any one LC oscillator in detail. [6]**

**Q-4 List different types of lasers. Explain any one in detail with neat diagram. [6]**

OR

**Q-4 Explain homojunction and hetro-junction structure layers of LED. [6]**

**Q-5 Discuss fiber optics construction of direct melt method with neat diagram. [6]**

OR

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

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