

(59) Seat No.: _____

No. of Printed Pages : 2

SARDAR PATEL UNIVERSITY V.V.NAGAR

B.Sc.INSTRUMENTATION(V)

SEM-II, OCTOBER-2016(NC) EXAMINATION

SUB. CODE:-US02CINV02

SUB: INSTRUMENTATION SYSTEM-II

DATE:-21/10/2016, Friday

TIME:-2:00 pm to 4:00 pm

MARKS-70

[10]

Q-1 Choose correct answer

1. Power supply convert A.C. voltage to _____.
(A) D.C (C) Low A.C. voltage
(B) High A.C. voltage (D) None of above
2. Step up transformer have total _____ windings.
(A) 1 (C) 2
(B) 3 (D) 4
3. "C" filter normally connect in _____ for filtering pulse sating D.C.
(A) Parallei (C) Can not use
(B) Series (D) None of above
4. A device convert non electrical quantity into electrical signal is called _____.
(A) Filter (C) Transducer
(B) Rectifier (D) none of above
5. In Piezo electric transducer _____ type of material is used.
(A) Non crystalline (C) Crystalline
(B) Polar (D) none of above
6. Potentiometric transducer work on the principle of _____.
(A) Resistance (C) Inductance
(B) capacitance (D) none of above
7. Photo Darlington pair required minimum _____ transistors.
(A) 1 (C) 3
(B) 2 (D) 4
8. The radiation frequency exceeds the _____ frequency of cathode material electrons are emitted from the surface.
(A) Threshold (C) Lowest
(B) Highest (D) none of above
9. 1 lm (lumens) = _____ mW (milli watt).
(A) 1.496 (C) 14.69
(B) 146.9 (D) none of above
10. Bridge rectifier consists of _____ diodes.
(A) 1 (C) 2
(B) 4 (D) 3

[20]

Q-2 Short answer type question. (any ten)

1. List opto- electric devices.
2. State difference between half wave and full wave rectifier.
3. List the different principle of displacement types.
4. Draw and label the block diagram of power supply.
5. What is transducer? List different types of transducers.
6. Draw the bourdon tube schematic diagram.
7. What is function of voltage regulator in power supply ?
8. What is piezoelectric effect? Draw the symbol of piezoelectric transducer.
9. Explain photo diode in short.
10. List the force summing members.
11. Explain solar cell in short.
12. List and draw schematic diagram of different types of filters.

(P.T.O)

- Q.3 (A) Explain full wave bridge rectifier in detail. [05]
(B) Explain LC and π filter in detail. [05]
- OR
- Q.3 Draw block diagram of power supply and explain each block in detail. [10]
- Q.4 Draw the schematic diagram of strain gauge, explain its working principle, and derive an equation for it. [10]
- OR
- Q.4 (A) Explain potentiometric transducer in detail. [05]
(B) Discuss metallic sensing element. [05]
- Q.5 (A) Discuss the method of selecting a transducer? [05]
(B) Explain inductive transducer in detail. [05]
- OR
- Q.5 Draw any four displacement transducers and explain in detail. [10]
- Q.6 Explain photo multiplier tube in detail. [10]
- OR
- Q.6 Write a note on photo conductive cell in detail. [10]

