

Assignment
PHYSICS
(3rd Semester)
Course No. : PHSSEC – 301 T
(Workshop Skill)

Full Marks: 50

Pass Marks: 20

Write assignment on **any five** of the following.

5 X 10 = 50

1. Discuss briefly about Sextant and its usefulness to measure the height of a tower.
2. Describe the working of a slide calliper to measure the volume of a cylindrical body.
3. Explain briefly about Machining operation.
4. Give a brief introduction of Steel and its classification.
5. Explain the working of a Lathe.
6. Briefly discuss about the Milling process.
7. Discuss about the Hydraulic brake system and its advantages and disadvantages.
8. Explain different classes of Lever system.
9. Write a short note on Multimeter.
10. Describe the Block Diagram of a CRO, mentioning their functions.

TDC (CBCS) Odd Semester Examination: 2020

PHYSICS

(5TH Semester)

Course No.: Physics- SEC-501

(Basic Instrumentation skills)

Full Marks: 50

(Answer **any five** Questions from the following):

1. what is a multimeter ? what type of measurements can be made with a multimeter? Explain with suitable diagrams. 10
2. a) Define different types of errors in electrical measuring instruments. 5
b) what is loading effect of electrical instruments? How you can minimize loading effects on voltmeter? 3+2
3. a) what is electronic voltmeter? Explain working of electronic voltmeter. 2+3
b) state different types of electronic voltmeter. Give advantages of electronic voltmeter. 3+2
4. a) Give block diagram of AC Milivoltmeter. Explain rectifier amplifier type AC Milivoltmeter. State significance of AC Milivoltmeter. 2+3+2
b) what are the principles of measurements of DC Voltage and DC Current? 3
5. what is CRO? Give its block diagram. Explain construction and working of CRT. 1+3+6
6. Define deflection sensitivity of CRT. How will you make measurements of voltage, frequency and waveforms with a CRO? Explain. 1+9
7. Explain working of Function Generator . State applications of Function Generator. Differentiate between a pulse Generator and a Signal Generator. 4+3+3
8. what is LCR meter? Give block diagram of LCR meter. Explain the working of LCR meter. 2+2+6
9. a) What is a VTVM? Explain balanced bridge type VTVM with neat circuit diagram. 2+5
b) Discuss the advantages and disadvantages of VTVM. 3
10. a) what is the frequency counter? Give its circuit diagram and explain its working principle. 2+5
b) Define Universal counter with block diagram. 3