



SHRI VISHWAKARMA SKILL UNIVERSITY

(A State Skill University, setup by an Act of Legislature in 2016)

187025

Course : B.Voc. Robotics and Automation
Subject : Applied Physics
Subject Code : ZBSC-103
Semester : First
Duration : 3 Hours
Maximum Marks : 35

Instructions to the Students

1. This Question paper consists of two Sections. All sections are compulsory.
2. **Section A** comprises 10 questions of objective type in nature. All questions are compulsory. Each question carries 1 mark.
3. **Section B** comprises 8 essay type questions out of which students need to do any 5. Each question carries 5 marks.
4. Read the questions carefully and write the answers in the answer sheets provided.
5. Do not write anything on the question paper.
6. Wherever necessary, the diagram drawn should be neat and properly labelled.

Roll Number

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SECTION –A (OBJECTIVE TYPE QUESTIONS)

(10x1=10 Marks)

- Q1 Why length, mass and time are chosen as base quantities in measurement systems?
- Q2 What is resistance thermometry?
- Q3 State Hooke's law.
- Q4 What is surface tension?
- Q5 Define velocity ratio.
- Q6 What is the difference between reversible and self-locking machine?
- Q7 What are the characteristics of LASER?
- Q8 What do you understand by the term Stimulated emission of radiation?
- Q9 What are photovoltaic cells?
- Q10 Mention two applications of Nanotechnology?

SECTION –B (ESSAY TYPE QUESTIONS)

(5x5=25 Marks)

- Q1 Write note on Thermometry.
- Q2 What do you understand by the terms: atmospheric pressure, gauge pressure and absolute pressure?
- Q3 Explain basic laws of mechanics.
- Q4 What is the working principle and application of simple screw jack, worm and worm wheel?
- Q5 Describe the principle, construction and working of a He-Ne laser.
- Q6 What is an optical fiber? How optical fibers are classified based on modes and refractive index profile?
- Q7 What is solar cell? Explain the construction, working and characteristics of solar cell.
- Q8 What is Nanotechnology? Discuss the applications of the technology.

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