Visit QB365-SLMS - https://www.qb365.in/slms/ Complete Questions and Answers

# Answers Key:

### 7 Marks

1. **Finding the outer diameter of the tea cup:**
   1. Place the tea cup between the outside jaws.
   2. Note the reading of main scale and vernier coincidence. Tabulate the readings.
   3. The outer diameter of the tea cup is calculated by MSR + (VC x LC).
   4. Repeat the experiment and find the average diameter.

   **Finding the inner diameter of the tea cup:**
   1. Place the tea cup between the inside jaws.
   2. Note the reading of main scale and vernier coincidence.
   3. Tabulate the readings.
   4. The inner diameter of the tea cup is calculated by MSR + (VC x LC).
   5. Repeat the experiment and find the average diameter.

| S.No | | MSR | VSC | MSR + (VC x LC) ± ZC |
|---|---|---|---|---|
| 1.<br>2.<br>3. | Outer diameter | | | |
| 1.<br>2.<br>3. | Inner diameter | | | |

The thickness of tea cup = outer reading - inner reading = _____ mm

### Match the following

2. (☒) second
3. (☒) kelvin

### 4 Marks (write any 1)

4.

| Mass | Weight |
|---|---|
| 1. Fundamental quantity | Derived quantity |
| 2. It is a scalar quantity | It is a vector quantity |
| 3. The amount of matter contained in a body | Normal source exerted by the surface on the object against gravitational pull |
| 4. It remains the same | Varies from place to place. |
| 5. Its unit is kilogram | Its unit is newton. |

5. The value is one smallest main scale division is divided by total number of vernier scale division is called the least count of vernier caliper.

$$\text{Least count} = \frac{\text{The value of one smallest main scale division}}{\text{Totalnumber of vernier scale division}}$$

$$\text{L.C} = \frac{1\text{ mm}}{10} = 0.1\text{ mm} = 0.01\text{ cm}$$

### 2 Marks (write any 2)

6. Full form of SI system is "International system of units"
7. Least count is least distance measured by a device. In Vernier Caliper the value of one smallest main scale division is divided with total number of vernier scale division.
8. The pitch of the screw is the distance moved by the tip of the screw for one complete rotation of the head. It is equal to 1 mm in typical screw gauges.

$$\text{Pitch of the screw} = \frac{\text{Distance moved by the Pitch}}{\text{No. of rotations by Head scale}}$$

### Fill in the blanks

9. (☒) common (beam) balance
10. (☒) Vernier Caliper

### Multiple Choice Question

11. (b) 10 quintals