



DIPLOMA IN AUTOMOBILE ENGINEERING

CENTRALIZED QUESTION BANK

1020234640 - METROLOGY AND MEASUREMENTS

**DIRECTORATE OF TECHNICAL
EDUCATION GOVERNMENT OF
TAMILNADU**

DIPLOMA END SEMESTER / YEAR EXAMINATION – 2025

Course: Automobile Engineering

Subject : Metrology and Measurements

QP Code : 1020234640

Time : 3 Hours

Date :

Session:

Max Marks:100

For Practical Experiments

Note: Select any one exercise by lot or question paper supplied by the DOTE Exam section shall be used.

Answer the following questions

1. VERNIER CALIPER
 - i) Measure the dimensions of ground MS flat/ Cylindrical bush using Vernier Caliper.
 - ii) Compare the results with Digital Vernier Caliper.
2. OUT SIDE MICRO METER
 - i) Measure the diameter of a wire using micrometer
 - ii) Compare the results with a digital Outside micrometer.
3. INSIDE MICROMETER
 - i) Measure the inside diameter of the bore of a bush cylindrical component using Inside micrometer
 - ii) Compare the results with digital inside micrometer.
4. SLIP GAUGES

Measure the thickness of ground MS plates using slip gauges.
5. VERNIER HEIGHT GAUGE

Measure the height of gauge blocks or parallel bars using vernier height gauge
6. MECHANICAL COMPARATOR

Find out the measurement of a given component and Compare with a standard component using a mechanical comparator and slip gauge.
7. UNIVERSAL BEVELPROTRACTOR

Measure the angle of a V-block/Taper Shank of Drill/Dovetail using universal bevel protractor.
8. SINEBAR

Measure the angle of the machined surface using sine bar with slip gauges

- 9 **SCREW THREAD MICROMETER**
Measure the geometrical dimensions of V-Thread using screw thread micrometer
- 10 **GEAR TOOTH VERNIER CALIPER**
Measure the geometrical dimensions of spur gear using gear tooth Vernier Caliper

Allocation of Marks

Sl. No	Description	Marks
1	Procedure / Preparation	10
2	Observation / Dimensions	20
3	Calculation / Accuracy	20
4	Result	10
5	Viva voce	10
6	Written test	30
	Total	100