



# **DIPLOMA IN REFRIGERATION & AIR CONDITIONING**

## **CENTRALIZED QUESTION BANK**

**1020234640 - METROLOGY AND  
MEASUREMENTS**

**DIRECTORATE OF TECHNICAL  
EDUCATION GOVERNMENT OF  
TAMILNADU**

## **DIPLOMA END SEMESTER / YEAR EXAMINATION – 2025**

**Course:** Refrigeration & Air conditioning

**Subject :** Metrology and Measurements

**QP Code :** 1020234640

**Time :** 3 Hours

**Date :**

**Session:**

**Max Marks:** 100

### **Answer the following Questions**

- i) Measure the dimensions of ground MS flat/Cylindrical bush using Vernier Caliper.
- ii) Compare the results with Digital Vernier Caliper.

### **Allocation of Marks**

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

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**Max Marks:** 100

**Answer the following Questions**

- i) Measure the diameter of a wire using micrometer
- ii) Compare the results with a digital Outside micrometer.

**Allocation of Marks**

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

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**Answer the following Questions**

- i) Measure the inside diameter of the bore of a bush cylindrical component using Inside Micrometer
- ii) Compare the results with digital inside micrometer.

**Allocation of Marks**

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

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**Max Marks:** 100

**Answer the following Questions**

- i) Measure the thickness of ground MS plates using slip gauges.

**Allocation of Marks**

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

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**Session:**

**Max Marks:** 100

**Answer the following Questions**

- i) Measure the height of gauge blocks or parallel bars using vernier height gauge..

**Allocation of Marks**

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

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**Session:**

**Max Marks:** 100

**Answer the following Questions**

- i) Find out the measurement of a given component and Compare with a standard Component using a mechanical comparator and slip gauge.

**Allocation of Marks**

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

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**Session:**

**Max Marks:** 100

**Answer the following Questions**

- i) Measure the angle of a V-block/Taper Shank of Drill / Dovetail using universal bevel Protractor.

**Allocation of Marks**

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



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**Time :** 3 Hours

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**Session:**

**Max Marks:** 100

**Answer the following Questions**

- i) Measure the angle of the machined surface using sine bar with slip gauges.

**Allocation of Marks**

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

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**Time :** 3 Hours

**Date :**

**Session:**

**Max Marks:** 100

### **Answer the following Questions**

- i) Measure the geometrical dimensions of V-Thread using screw thread micrometer.

### **Allocation of Marks**

<b>Sl No</b>	<b>Description</b>	<b>Max Marks</b>
1	Procedure / Preparation	10
2	Observation / Dimensions	20
3	Accuracy	20
4	Result	10
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	<b>Total</b>	<b>100</b>

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**Date :**

**Session:**

**Max Marks:** 100

**Answer the following Questions**

- i) Measure the geometrical dimensions of spur gear using gear tooth vernier caliper.

**Allocation of Marks**

<b>Sl No</b>	<b>Description</b>	<b>Max Marks</b>
1	Procedure / Preparation	10
2	Observation / Dimensions	20
3	Accuracy	20
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