

**IV.B.TECH- I-SEM (R20)-I MID EXAMINATIONS-AUGUST-2023 Date: 01/09/2023**

**Subject: Measuring Instruments Time:10:00 TO 11:30 A.M**

**Branch:**  **CSD-B, IT-B & CSM-A Marks: 25 M**

***Answer All Questions In Part-A& Part-B***

**PART-A 5x2=10 M**

1. Classify Different sources of Errors. And Describe Gross Error. (CO2)
2. Define the following static characteristics terms : Hysteresis and Threshold. (CO2)
3. Distinguish between RTD and Thermistor. (CO1)
4. What are the applications of Capacitive Transducers. (CO2)
5. Differentiate between Vernier calipers and Micrometer. (CO1)

**PART-B 3\*5=15 M**

1. Classify the errors and explain in detail about different sources of errors and remedies to eliminate them.

(CO1)

**(OR)**

1. What are the different standards of instruments, Explain the Voltage standard with examples. (CO1)
2. Explain the working of LDR and it is used in displacement Measurement with neat sketch. (CO3)

**(OR)**

1. Discuss the working of linear and rotary Potentiometers with neat sketches and mention the advantages and limitations. (CO3)
2. Explain the mechanical comparator with neat sketches. (CO3)

**(OR)**

1. With neat sketches explain the working of Talysurf surface instrument for surface roughness measurement. (CO3)

**SCHEME OF EVALUATION**

**Part –A**

| **SNO** | **THEORY** | **MARKS** | **TOTAL** |
| --- | --- | --- | --- |
| **1** | Classify Different sources of Errors. And Describe Gross Error. | **2** | **2** |
| **2** | Define the following static characteristics terms : Hysteresis and Threshold | **2** | **2** |
| **3** | Distinguish between RTD and Thermistor. | **2** | **2** |
| **4** | What are the applications of Capacitive Transducers. | **2** | **2** |
| **5** | Differentiate between Vernier calipers and Micrometer. | **2** | **2** |

**Part –B**

| **SNO** | **THEORY** | **MARKS** | **TOTAL** |
| --- | --- | --- | --- |
| **6** | Classify the errors and explain in detail about different sources of errors and remedies to eliminate them.  **(OR)** | **5** | **5** |
| **7** | What are the different standards of instruments, Explain the Voltage standard with examples. | **5** |  |
| **8** | Explain the working of LDR and it is used in displacement Measurement with neat sketch.  **(OR)** | **5** | **5** |
| **9** | Discuss the working of linear and rotary Potentiometers with neat sketches and mention the advantages and limitations | **5** |  |
| **10** | Explain the mechanical comparator with neat sketches.  **(OR)** | **5** | **5** |
| **11** | With neat sketches explain the working of Talysurf surface instrument for surface roughness measurement. | **5** |  |