NETTUR TECHNICAL TRAINING FOUNDATION

DIPLOMA IN TOOL ENGINEERING & DIGITAL MANUFACTURING– CP01

I SEMESTER REGULAR & SUPPLEMENTARY EXAMINATION-JAN 2023

Subject: Metrology **Total Time: 2 Hr.**

Subject Code: CP01104T **Total Marks: 50**

PART B

1.0 ANSWER ANY EIGHT OF THE FOLLOWING **2*8=16**

1.1 Write the classification of metrology

1.2 Define unit & measurement

1.3 What do you mean by gauges?

1.4 Write the uses of grade 1 and grade 0 slip gauges

1.5 Write the SI unit of the following: a) Mass b) Length c) Time d) Temperature

1.6 List out the different types of calipers

1.7 What is meant by linear Measurements? Write any 2 linear measuring instruments

1.8 What is the use of radius gauge?

1.9 Name the types of dial indicators

1.10 How metrology is important in industry?

2.0 ANSWER ANY SIX OF THE FOLLOWING **3*6=18**

2.1 Write the difference between precision and accuracy

2.2 Write a short note on V anvil micrometer

2.3 List down the various materials commonly used for gauges

2.4 What are the factors affecting the desirable wringing effect in slip gauge?

2.5 Differentiate inside and outside calipers

2.6 What are the recommended slip gauge sets in the Metric units?

2.7 Write down the characteristics of material used for gauges

2.8 What are the various types of plain plug gauges?

3.0 ANSWER ANY FOUR OF THE FOLLOWING **4*4=16**

3.1 Write the prefix of the following multiple factor

a. 10^{3} b. 10^{-3} c. 10^{6} d.10^{-6} e.10^{9} f.10^{-9}

3.2 Explain Vernier height gauge with labelled diagram

3.3 With a neat sketch explain errors in micrometer

3.4 Explain telescopic gauge

3.5 How are gauges classified? Explain

3.6 Explain the grades of slip gauges