

NETTUR TECHNICAL TRAINING FOUNDATION
DIPLOMA IN TOOL ENGINEERING & DIGITAL MANUFACTURING– CP01
III SEMESTER REGULAR & SUPPLEMENTARY EXAMINATION-JAN 2023

Subject: Metrology

Total Time: 2 Hr.

Subject Code: CP01307T

Total Marks: 50 Marks

PART B

1.0 ANSWER ANY EIGHT OF THE FOLLOWING

2*8=16

- 1.1 What are the different methods of checking hardness of metal?
- 1.2 Explain the term Interferometry
- 1.3 List two types of dial indicators based on working principle
- 1.4 List out two errors in circularity
- 1.5 Explain the term runout.
- 1.6 Brief the term lay.
- 1.7 List two methods of measuring surface finish
- 1.8 Explain the term Roughness.
- 1.9 List any four monochromatic light sources.
- 1.10 Explain the term Parallelism.

2.0 ANSWER ANY SIX OF THE FOLLOWING

3*6=18

- 2.1 Differentiate Rockwell 'B' scale & Rockwell 'C' scale.
- 2.2 Briefly explain Constructive Interference.
- 2.3 Write any three necessary conditions for interference to occur
- 2.4 Explain Straight edge method of checking flatness.
- 2.5 Explain Try Square method of checking Squareness.
- 2.6 Why White light is not used in interferometry techniques?
- 2.7 List the three analysis performed on surface traces.
- 2.8 Briefly explain Brinell hardness test.

3.0 ANSWER ANY FOUR OF THE FOLLOWING

4*4=16

- 3.1 Draw different fringe patterns obtained through optical flat.
- 3.2 Explain Autocollimator method of checking flatness.
- 3.3 Draw a neat sketch of plunger type dial indicator and label the parts.
- 3.4 Explain the working of profilometer with a neat sketch
- 3.5 Briefly explain how to check parallelism of two planes.
- 3.6 Briefly explain how to check the angle of a tapered hole?

