

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

Subject: Press Tool Technology
Subject Code: CP01501T

Total Time: 2 Hr.
Total Marks: 50

PART B

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

- 1.1 Write the formula for calculating buckling force
- 1.2 What is wrinkling?
- 1.3 Describe lubricants that contain oil and solid substances
- 1.4 How is blank holding force is calculated?
- 1.5 List the type of lubricants used in deep drawing operations.
- 1.6 Mention the factors that decide number of draws
- 1.7 How is process capability defined?
- 1.8 What is normal distribution?
- 1.9 What are the problems faced with cutting die plates?
- 1.10 Mention the importance of bridge design

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

- 2.1 How does buckling phenomena help tool designers?
- 2.2 Explain the graphical method of calculating blank diameter
- 2.3 Why are air vents provided in drawing dies?
- 2.4 Explain the forces acting in deep drawing.
- 2.5 What are the causes and remedies for puckering?
- 2.6 The material of a component is silicon steel. Write the ways of improving the tool life in this case.
- 2.7 Explain a progressive tool with angular bending with a neat sketch
- 2.8 Explain process of curling operation in a progressive tool at different stages

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

- 3.1 Determine the blank diameter required to produce a cup of $\text{Ø}68\text{mm}$, height 76mm, corner radius 3.5mm drawn from a 1mm DD Quality steel
- 3.2 What is the sequence of drawing operation on single action press?
- 3.3 Describe the process of Eyelet drawing
- 3.4 Explain 4 methods to prolong tool life
- 3.5 Differentiate chance and assignable cause.
- 3.6 What are the preventive methods to avoid jamming?

