

2107021

DIPLOMA
Press Tool and Die Maintenance and Stamping
Subject: Fundamentals of CNC Machines
Subject Code: NDME-105
Semester: First
July 2021
Theory (External): 70 Marks
Time: 03 Hours

Instructions to the Students

1. This Question paper consists of two Sections. All sections are compulsory.
2. Section A comprises 10 questions of objective type in nature. All questions are compulsory. Each question carries 2 marks.
3. Section B comprises 8 essay type questions out of which students need to do any 5. Each question carries 10 marks.
4. Read the questions carefully and write the answers in the answer sheets provided.
5. Do not write anything on the question paper.
6. Wherever necessary, the diagram drawn should be neat and properly labelled

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SECTION –A (SHORT/OBJECTIVE TYPE QUESTIONS)
(10x2=20 Marks)

- A. Discuss Advantages and Disadvantages of CNC machines.
- B. Discuss the function of pre-set tooling.
- C. Discuss the function of qualified tooling.
- D. Discuss the function of Calipers.
- E. Discuss the properties of cast alloy.
- F. Explain the principle of tool design.
- G. Define the working of micro controller.
- H. Define the concept of feedback devices.
- I. Discuss the function of Micrometer.
- J. What do you meant by Roundness and Circularity?

SECTION –B (ESSAY TYPE QUESTIONS)
(5x10=50 Marks)

1. Differentiate between conventional machine tools and CNC Machine tools with neat diagrams.
2. Explain the construction and working of CNC machine with neat and clean diagram along with industrial applications.
3. Discuss the Factors considered in selecting the tooling for CNC Machines.
4. Explain the working of different types of tool holding devices with neat diagrams.
5. Discuss the working of depth gauge with neat diagram along with their industrial applications.
6. Discuss the working of Automatic tool changer with neat diagram along with suitable applications.
7. Explain the construction and working of Vernier bevel protector with neat diagram along with industrial applications.
8. Explain the working of PLC with neat diagram along with suitable applications.

===END OF PAPER ===