

**CNC MACHINES & AUTOMATION**  
**6<sup>th</sup> Exam/Mech./5380/Dec'22**  
**(For 2018 Batch Onwards)**

**Duration: 3Hrs.**

**M.Marks:75**

**SECTION-A**

**Q1. Do as directed.**

**15x1=15**

- a. What is DNC?
- b. When the tool moves in circular motion it is called \_\_\_\_\_ interpolation.
- c. Write one difference between open loop and closed loop control systems.
- d. MCU stands for Machine \_\_\_\_\_ Unit.
- e. M05 is the code for \_\_\_\_\_.
- f. \_\_\_\_\_ switches are used to determine the end of travel.
- g. Tachometers are used for measuring \_\_\_\_\_.
- h. In CNC Turning center the axis along which the tool travels is \_\_\_\_\_ axis.
- i. Full form of HMC is \_\_\_\_\_.
- j. FMS is \_\_\_\_\_ manufacturing \_\_\_\_\_.
- k. Full form of ATC is \_\_\_\_\_.
- l. Canned Cycles are also called as Fixed Cycles. (T/F)
- m. G42 is the code for \_\_\_\_\_.
- n. All inputs/outputs are connected to \_\_\_\_\_ in a CNC machine.
- o. Block Number is denoted by letter \_\_\_\_\_.

**SECTION-B**

**Q2. Attempt any six questions.**

**6x5=30**

- i. What is a MCU's? Explain any one.
- ii. Write a short note on Serial Communication.
- iii. Briefly explain Automatic Assembly.
- iv. Give any five safety precautions for a machine operator.
- v. How do we identify the X, Y & Z-axis of a Vertical Machining Center?
- vi. Write any five G or M codes with their purpose.
- vii. Explain G41 using a neat diagram.

**SECTION-C**

**Q3. Attempt any two questions.**

**2x15=30**

- a. Write short notes on manufacturing of Integrated Circuits and Printed Circuit Boards.
  - b. Explain all the three types of Programming Formats for CNC Machines.
  - c. Write short notes on Potentiometers and LVDT.
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