



Q.20 What are the main components of MCU? Explain in detail.

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Branch : Advance Diploma in Tool & Die Making

Subject : CNC Technology

Time : 2 Hrs.

M.M. : 50

SECTION-A

Note: Multiple choice Questions. All Questions are compulsory. (5x1=5)

- Q.1 Which of the following is not the advantage of CNC machines?
- Higher flexibility
 - Improved quality
 - Reduced scrap rate
 - Improved strength of the components
- Q.2 NC contouring is an example of
- Continuous path positioning
 - Point-to-point positioning
 - Absolute positioning
 - Incremental positioning
- Q.3 Miscellaneous Code M03 describes
- Spindle ON clockwise
 - Spindle ON counter clockwise
 - Coolant ON
 - Coolant OFF

- Q.4 What is the function of slideways in CNC?
- Reduce friction
 - Reduce Wear
 - Improve smoothness of the drive
 - All of the mentioned
- Q.5 What is the purpose of using re-circulating ball screw nut mechanism in CNC machine;
- To reduce the set up time
 - To remove backlash
 - To remove jerks in machine
 - For higher surface finish

Section-B

Note: Objective type questions. All questions are compulsory. (5x1=5)

- Q.6 The punched tape contains _____ for NC Machine.
- Q.7 An absolute NC system is one in which all position coordinates are referred to one fixed origin called the zero point. True/False
- Q.8 2-1/2D milling tool paths machine only in the XY plane. (True/False)
- Q.9 A boring bar is used to create a precision size and finish hole through the bore of the part. These are mounted axially with the spindle. (True/False)
- Q.10 The part datum for lathe parts is usually the center-face of the finished part. (True/False)

Section-C

Note: Very Short answer type Questions. Attempt any six questions out of eight Questions. (6x5=30)

- Q.11 Compare NC machine tools with conventional machine tools.
- Q.12 Differentiate between open and closed loop control systems.
- Q.13 What do you mean by canned cycle? Also write down its advantages in programming CNC machines.
- Q.14 Write a short note on automatic tool changer.
- Q.15 Write the various Principle of selection of Machine control system for CNC machining.
- Q.16 Discuss about CNC EDM-spark erosion.
- Q.17 What do you know about Machine and Work reference? Discuss it for CNC grinding machine.
- Q.18 What is cutter radius compensation? Write the various G-codes associated with it.

Section-D

Note: Long answer type questions. Attempt any one questions out of two Questions. (1x10=10)

- Q.19 The components to be drilled is shown in Figure. Develop the part program without and with the use of canned cycle. Assume any other relevant data required.