

2101254

**BACHELOR OF VOCATION**

**Automotive Manufacturing**

**Subject: Computerized Numerical Control Machines (CNC) II**

**Subject Code: BBME-214**

**Semester: Fourth**

**January 2021**

**Theory (External): 35 Marks**

**Time: 03 Hours**

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**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 1 mark.
3. Section B comprises 6 essay type questions out of which students need to do any 5. Each question carries 5 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

**Roll Number**

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**SECTION –A (SHORT/OBJECTIVE TYPE QUESTIONS)**  
**(10x1=10 Marks)**

- A. What do you understand the part programming?
- B. What is the importance of G Codes in part programming?
- C. What is the function of M02 Code in part programming?
- D. What are the advantages of Computer Aided Part Programming?
- E. Describe the part zero in part programming.
- F. What is the machine zero?
- G. Define the applications of Drill Cycle.
- H. What is the Bore cycle?
- I. What is cutting speed, discuss with example
- J. What is virtual machining?

**SECTION -B (ESSAY TYPE QUESTIONS)**  
**(5x5=25 Marks)**

1. Write a CNC program using appropriate G and M code to turn component as Shown in Figure 1. Raw material: MS  $\Phi 32 \times 50$  mm, cutting speed  $V = 40$  m/min and feed = 0.1, Assume suitable data for depth of cut.

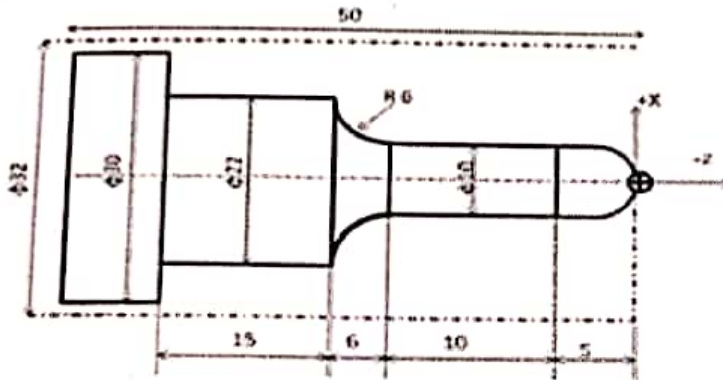


Figure 1

2. Explain Computer Aided Part Programming and its applications related to manufacturing industries.
3. Which are formats used for manual part programming? Write the word address format.
4. What are canned cycles? Discuss how a canned cycle is useful in writing a part program?
5. What are the different types of contouring system in a CNC machine? Explain with neat sketches.
6. Explain types of statements used in APT language.

==END OF PAPER==