

2112E122

BACHELOR OF VOCATION
Automotive Mechatronics
Subject: Computer Numerical Control Machines (CNC)
Subject Code: ABME-206
Semester: Fourth
December 2021
Theory (External): 35 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 1 mark.
3. Section B comprises 8 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

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

- A. Define the applications of conventional machines
- B. Define the function of NC machine
- C. Discuss the application of qualified tool
- D. Define the function of carbide tool
- E. Define the application of brazed tool
- F. What do you meant by floating zero
- G. What do you meant by Machine Zero
- H. Define speed
- I. Define feed rate
- J. Define depth of cut

4. Explain G and M Codes of CNC Machine and also mention their applications.
5. Discuss the method of writing the part programme with suitable example
6. Discuss the Computer aided Part Programming with suitable example and applications
7. Discuss APT Programming sequence with suitable example and applications.
8. Explain design features of CNC tooling with suitable example and applications.

==END OF PAPER ==

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

1. Differentiate between CNC and DNC machine with suitable example along with industrial applications.
2. Explain the working of different components of CNC machine with neat and clean diagram and also mention its advantages and disadvantages.
3. Discuss the Factors considered in selecting the tooling for CNC Machines.