

# Question Paper

Exam Date & Time: 11-May-2023 (09:30 AM - 12:30 PM)



**MANIPAL ACADEMY OF HIGHER EDUCATION**

**INTERNATIONAL CENTRE FOR APPLIED SCIENCES  
END SEMESTER THEORY EXAMINATION - MAY 2023  
IV SEMESTER B.Sc (Applied Sciences) in Engg.**

**AUTOMATED MANUFACTURING SYSTEMS [IMET 243 - S2]**

**Marks: 50**

**Duration: 180 mins.**

**Answer all the questions.**

**Missing data, if any, may be suitably assumed**

- 1) Illustrate Adaptive Control (AC) Machining and explain the sources of variability of ACO along with an example and where to use the AC. (5)
  - A)
  - B) Demonstrate the application of bar code with an example. (3)
  - C) Illustrate Variant (Retrieval) Computer Aided Process Planning. (2)
- 2) Classify different types of coding scheme structures along with the basic structure of Opitz Classification and Coding System. (3)
  - A)
  - B) Given the rotational part design below in figure Q2b, determine the form code in the Opitz parts classification and coding system. (5)

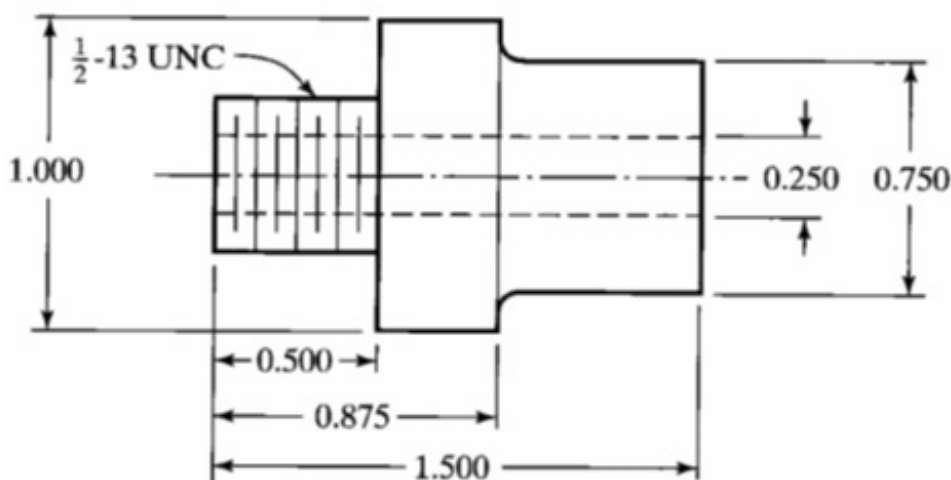


Figure Q2b.

- C) Illustrate the types of Flexible Manufacturing Systems based on Number of Machines. (2)