

PARUL UNIVERSITY
FACULTY OF ENGINEERING & TECHNOLOGY
M.Tech., Summer 2018 - 19 Examination

Semester: 2
Subject Code: 203208153
Subject Name: CNC Technology

Date: 08/05/2019
Time: 10:30 am to 01:00 pm
Total Marks: 60

Instructions:

1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

- Q.1** A) Give the classification of CNC machines. (05)
 B) Write a short note on Fuzzy logic. (05)
 C) Discuss the merits and demerits of CNC machines. (05)
- Q.2** Answer the following questions. (Attempt any three) (15)
 A) Enlist different manufacturing software. Explain anyone in detail.
 B) Explain the following codes:
 I. G02 & G03
 II. G00 & G01
 C) Write a short note on 3D printing. State its applications.
 D) Differentiate between stepper and servo motor with schematic diagram.
- Q.3** A) Compare VMC with turning centre on the basis of axis designation and construction. (07)
 B) Write a milling Part Program for the geometry given in figure 1. (08)
 Raw Material Size: 50 mm x 50 mm x 15 mm. Assume suitable cutting parameters.
- OR**
- B) Write a turning Part Program for the geometry given in figure 2. (08)
 Raw Material Size: ϕ 70 mm x 100 mm length. Assume suitable cutting parameters.
- Q.4** A) Classify sensors for robotics. Explain different types of sensors with their applications in detail. (07)
- OR**
- A) Write a short note on parametric programming used for CNC machines. (07)
 B) Discuss the various grippers used for robotics with their applications and figures. (08)

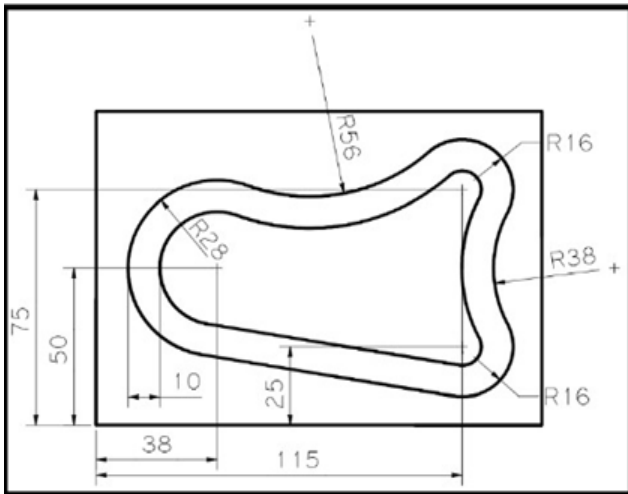


Figure 1

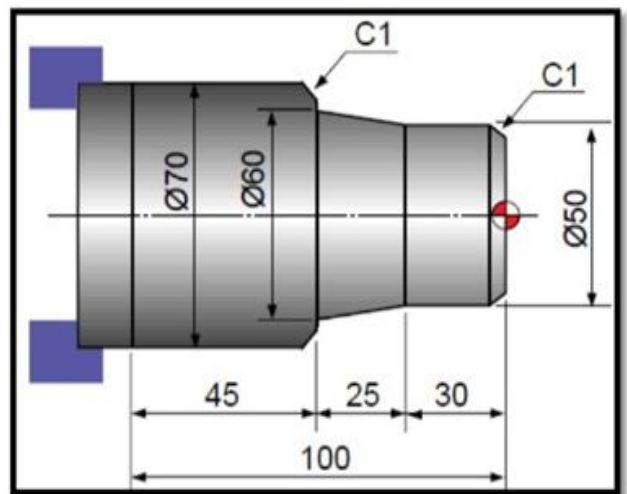


Figure 2