

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

**Semester: 2****Subject Code: 203219152****Subject Name: Computer Aided Manufacturing****Date: 06/05/2019****Time: 10:30am to 1:00pm****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) 1. Answer the Following questions: **(05)**

- I. In canned cycle “Q” used for the number of cycle repetitions. True or False?
- II. What is the syntax for G83?
- III. In CNC incremental mode the dimension measured from
  - a) reference point      c) part zero
  - b) machine zero        d) last point of tool location
- IV. Which code is used for SPOT DRILLING CYCLE?
  - a) G81 b) G83 c) G73 d) G80
- V. Which code is used for dwell time?
  - a) M04 b) P04 c) G04 d) G40

B) Give the classification of Flexibility. Explain any one in detail. **(05)**

C) What is canned cycle? Explain any three canned cycles with sketch. **(05)**

**Q.2** Answer the following questions. (Attempt any three) (Each five mark) **(15)**

- A) Differentiate between FMS and FMC.
- B) List types of encoders. Explain any one in detail.
- C) Enlist the types of ATC and explain any one with neat sketch.  
State the advantages of ATC.
- D) Draw CIM wheel with all its components.

**Q.3** A) Explain 3 Zeros for CNC programming with neat sketch. **(07)**

B) Write a milling Part Program for the geometry given in figure 1. **(08)**

Tool T01 : End milling Diameter 6 mm

Tool T02 : Drill tool Diameter 6 mm

Tool T03 : Drill tool Diameter 16 mm.

**OR**

B) Write a turning Part Program for the geometry given in figure 2. **(08)**

Raw Material Size:  $\phi$  40 mm x 88 mm length. Assume suitable cutting parameters.

**Q.4** A) Write a short note on parametric programming used for CNC machines. **(07)**

**OR**

A) State different types of statements used in APT language. Explain geometric statements with suitable example. **(07)**

B) Explain in detail about AS/RS and its applications. **(08)**

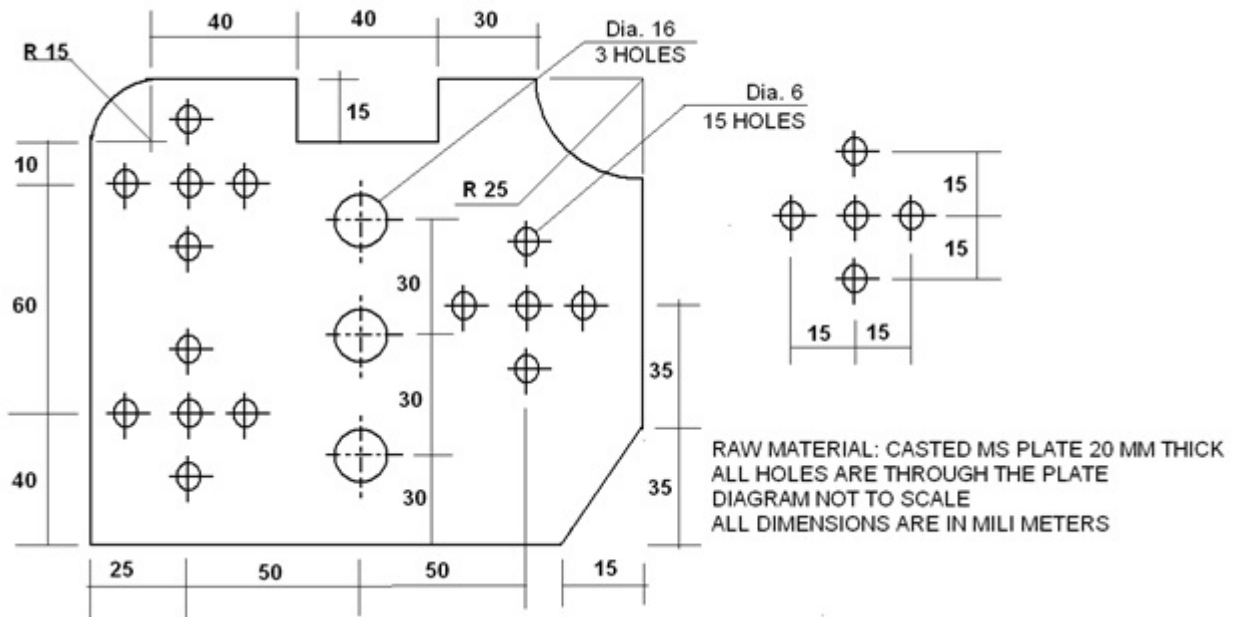


Figure 1

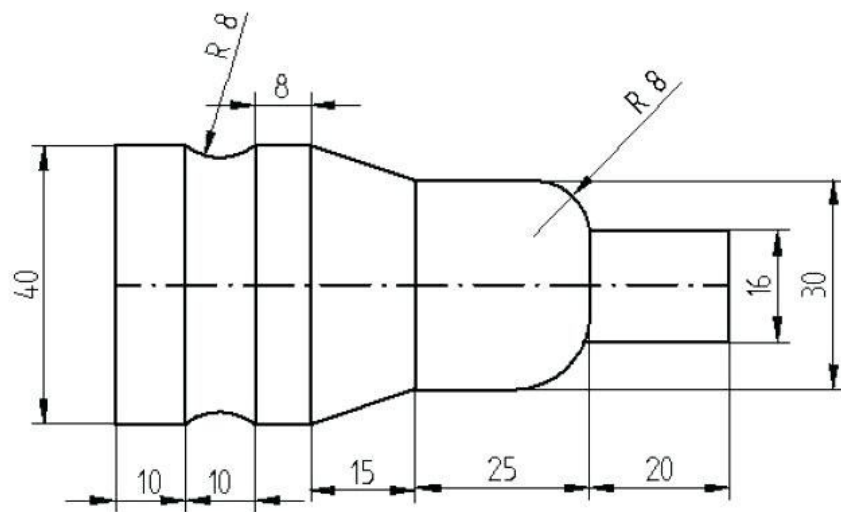


Figure 2