

**PARUL UNIVERSITY**  
**FACULTY OF ENGINEERING & TECHNOLOGY**  
**B.Tech. Winter 2019 - 20 Examination**

**Semester: 5**  
**Subject Code: 03113302**  
**Subject Name: Manufacturing Process - I**

**Date: 26/11/2019**  
**Time: 10:30am to 01:00pm**  
**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 Objective Type Questions** - ( Fill in the blanks, one word answer, MCQ-not more than Five in case (15)  
of MCQ) (All are compulsory) (Each of one mark)

- 1 Which machine tool is known as the mother machine tool?  
(A) drill (B) milling (C) lathe (D) none of mentioned
2. 15 mm drilling machine means that it can drill a hole?  
(A) Of maximum diameter 15 mm (B) In 15 mm thick plates  
(C) Having cross-sectional area of 15 mm<sup>2</sup> (D) None of these
3. Segmental chips are formed during machining  
(A) Mild steel (B) Cast iron (C) High speed steel (D) High carbon steel
4. In centre less grinders, the maximum angular adjustment of the regulating wheel is  
(A) 5° (B) 10° (C) 15° (D) 20°
5. In a shaper, the metal is removed during  
(A) Forward stroke (B) Return stroke  
(C) Both the forward and return strokes (D) Neither the forward nor the return stroke
6. Specify the unit of Feed and Depth of cut in Lathe Machine?
7. What is Indexing?
8. Enlist two operations performed on Milling machine?
9. Which Symbol's range of alphabet represents medium hardness grain in grinding wheel?
10. How many types of broaches are there?
11. Peripheral milling is well suited to the cutting of \_\_\_\_\_.
12. \_\_\_\_\_ type of feed is needed in facing operation.
13. \_\_\_\_\_ type of surface is produced in facing operation.
14. The angle between the face and flank of the single point cutting tool is known as \_\_\_\_\_.

15. Which type of chuck is used for self alignment?

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

- A) Classify different types of chips. Explain them in brief.
- B) Differentiate between shaper and Planer.
- C) Define the tool life. Describe factors affecting tool life.
- D) Discuss knurling, parting off and turning operation performed in lath machine.

**Q.3 A) Classify Milling machine. Explain principal parts of Column and Knee type Horizontal Milling machine with neat sketch. (07)**

- B) Explain the list of drilling machine operations and explain the any three in detail. (08)

**OR**

- B) With the help of front-view, top view and side –view draw single point cutting Tool geometry in brief. (08)

**Q.4 A) Explain the standard marking system for grinding wheels. (07)**

**OR**

- A) Discuss various types of lathe centers with their applications. (07)
- B) Explain working of hydraulic shaper with neat sketch (08)