

(Following Paper ID and Roll No. to be filled in your Answer Books)

Paper ID : 2012254

Roll No.

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## B.TECH.

Regular Theory Examination (Odd Sem-V), 2016-17

### MANUFACTURING SCIENCE & TECHNOLOGY - II

Time : 3 Hours

Max. Marks : 100

#### SECTION - A

1. Attempt all parts. All parts carry equal marks. Write answer of each part in short. (10×2=20)

- Name the two systems of designating the cutting tool.
- Discuss the variables affecting tool life.
- List the difference between shaper and planner.
- How the size of the boring machine is specified
- Mention four important factors that influence the selection of grinding wheel.
- Define lapping.
- Mention the applications of Friction Welding.

- h) What are different types of bonds used in Grinding Wheel?
- i) Define Weldability.
- j) State the applications of AJM.

## SECTION - B

**Note: Attempt any 5 questions from this section. (5×10=50)**

2. Discuss the various types of chips produced during metal machining with neat sketch.
3. Explain "Merchant force circle" along with assumptions.
4. Mention the specifications of lathe with a neat sketch. Also give the classification of lathe machines.
5. Explain up milling and down milling with a neat sketch.
6. Explain the working mechanism of cylindrical and surface grinding.
7. Define the terms :
 

a) Limits	b) Fits
c) Tolerance	d) Allowance
e) Basic Size	
8. Explain TIG and MIG welding process and enumerate its advantages.
9. Write short notes on
 

a) WJM	b) USW
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## SECTION - C

**Note: Attempt any 2 questions from this section (2×15=30)**

10. a) Sketch and explain the working of shaper. (6)
- b) What is meant by grit, grade and structure of grinding wheel? Explain. (9)
11. a) Write the various welding defects. Give the reasons and suggest the remedies. (9)
- b) Write a note on various brazing methods. (6)
12. Explain in detail the ECM and EBM process with neat sketch. (15)

