

(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)**

- a) Name the two systems of designating the cutting tool.
- b) Discuss the variables affecting tool life.
- c) List the difference between shaper and planner.
- d) How the size of the boring machine is specified
- e) Mention four important factors that influence the selection of grinding wheel.
- f) Define lapping.
- g) 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

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)

