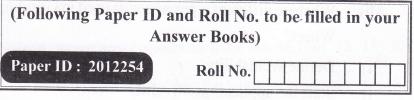
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B.TECH.

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. $(10 \times 2=20)$
 - 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.

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

SECTION - B

Note: Attempt any 5 questions from this section. $(5 \times 10 = 50)$

- 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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(2)

SECTION-C

Note: Attempt any 2 questions from this section $(2 \times 15 = 30)$

- 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)
- Explain in detail the ECM and EBM process with neat sketch. (15)

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