Printed Pages: 3

NME-503

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

Paper ID : 2012254	Roll No.								

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.

503/12/2016/14300   (1)   [P.T.O.

NME-503

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

NME-503

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)**

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