U.S.N

P.E.S. College of Engineering, Mandya - 571 401
(An Autonomous Institution affiliated to VTU, Belagavi)
Fourth Semester, B.E. - Automobile Engineering
Semester End Examination; May/June - 2018
Manufacturing Process - II

Time: 3 hrs
Max. Marks: 100

Note: i) Answer **FIVE** full questions, selecting **ONE** full question from each unit.
ii) Any missing data may be assumed.

UNIT - I

1 a.	With a neat sketch, explain geometry and nomenclature of single point cutting tool.	10
b.	Explain Merchants circle diagram and Ernst Merchants solution.	10
2 a.	Explain the desirable properties of a good cutting tool material.	10
b.	Explain the various cutting tool materials.	10

UNIT - II

3 a.	Explain various causes and types of tool wear.	6
b.	Explain the various factors affecting machinability.	7
c.	Explain the factors affecting heat generation.	7
4 a.	Explain the desirable properties of cutting fluid.	8
b.	Explain machinability and factors affecting heat generation.	12

UNIT - III

5 a.	Define speed, feed and depth of cut with respect to centre lathe.	6
b.	Discuss the constructional features of turret and capstan lathe.	8
c.	Discuss the different operations performed on lathe.	6
6 a.	Write the classification and specification of shaping and planning machines.	8
b.	Explain shaping and planning operations.	4
c.	Write a neat sketch and explain quick returns motion mechanism of shaping machine.	8

UNIT - IV

7 a.	Write the classification and operations carried out on drilling machine.	10
b.	Write the classification and constructional features of cylindrical and surface grinding machine.	10
8 a.	Discuss various types of abrasives and bonding materials used in grinding machines.	8
b.	Write the specification of grinding wheel.	4
c.	Discuss the factors influencing the selection of grinding wheel.	8

UNIT - V

9 a.	Mention types of milling cutters and write the nomenclature of milling cutter.	6
b.	Name different methods of production of gears.	6
c.	What is indexing and explain indexing methods.	8
10 a.	Explain with neat sketch, Electrochemical matching process and LBM method.	10
b.	Explain Galvanizing and metal spraying processes.	10

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