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**Question Paper Code : 90359**

B.E./B.Tech. DEGREE EXAMINATIONS, NOVEMBER/DECEMBER 2019  
Fourth Semester  
Industrial Engineering  
ME 8451 – MANUFACTURING TECHNOLOGY – II  
(Common to Industrial Engineering and Management/Mechanical Engineering/  
Mechanical Engineering (Sandwich) Mechanical and Automation Engineering)  
(Regulations 2017)

Time : Three Hours

Maximum : 100 Marks

Answer ALL questions.

PART – A

(10×2=20 Marks)

1. What is meant by tool life ?
2. Enumerate the differences between orthogonal and oblique cutting.
3. How is turret lathe classified ?
4. Write short notes on tool layout.
5. What are the different methods of indexing ?
6. Explain the principle of Quick return motion.
7. With the help of a neat figure explain a centerless grinders.
8. Draw a neat diagram of a broaching tool and label its important elements.
9. Brief on the term Numerical control.
10. What is NC part programming ?

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PART – B

(5×13=65 Marks)

11. a) Detail on the desirable properties of cutting fluids.  
(OR)  
b) Define machineability. What are the factors influencing machineability of a cutting tool.
12. a) Explain in detail thread cutting operation on a Lathe.  
(OR)  
b) Name the important and widely used tool holding devices used in a turret lathe.
13. a) With the help of a neat sketch explain a Vertical Milling Machine.  
(OR)  
b) Describe a gear hobbing machine with a neat sketch.
14. a) Explain the applications of various type of abrasives.  
(OR)  
b) With the help of a block diagram describe a Vertical Spindle rotary-table grinder.
15. a) Explain the architecture of NC system.  
(OR)  
b) Explain in detail Machining Centre and its applications.

PART – C

(1×15=15 Marks)

16. a) Explain in detail Orthogonal and Oblique Cutting.  
(OR)  
b) Explain in detail Tool Wear and also factors influencing tool wear.