Reg. No. : | | | | | | | | | | | | |

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 ?

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.