

CBCS SCHEME

USN

| | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|
| | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|

17AU46

Fourth Semester B.E. Degree Examination, Aug./Sept. 2020 Manufacturing Process – II

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. With a neat sketch, explain single point cutting tool nomenclature (10 Marks)
b. Explain briefly :
i) Merchant's circle diagram and analysis
ii) Ernst Merchant's Solution. (10 Marks)

OR

- 2 a. List the types of cutting tool materials and desired the property of cutting tool materials. (08 Marks)
b. Briefly explain :
i) Tool Failure Criteria
ii) Taylor's Tool life equation. (08 Marks)
c. Enumerate factors affecting heat generation in metal cutting. (04 Marks)

Module-2

- 3 a. What is the function of lathe? Explain with a neat sketch of Turret lathe. (10 Marks)
b. Explain the different operations on Lathe. (06 Marks)
c. Differentiate advantages and disadvantages of Lathe. (04 Marks)

OR

- 4 a. List the classification of shaping and planing machines and explain the function of each. (10 Marks)
b. Explain construction and working principle of shaping machine. (10 Marks)

Module-3

- 5 a. What is the function of milling machine? Differentiate up milling and down milling with a neat sketch. (10 Marks)
b. Explain briefly :
i) Various Milling Operations
ii) Simple and compound indexing. (10 Marks)

OR

- 6 a. List the types of abrasives, and explain briefly. (04 Marks)
b. Explain the different factor to be considered in the selection of a grinding wheel. (06 Marks)
c. With the help of block diagram, explain the working of a centre type of cylindrical grinding machine. (10 Marks)

Module-4

- 7 a. Draw a neat diagram of a Radial drilling machine. Name and explain the parts, its principle of operations. (10 Marks)
- b. Explain with sketches the following operations in a drilling machine.
i) Reaming ii) Boring iii) Counter boring iv) Taping. (10 Marks)

OR

- 8 a. With a simple sketch, explain the principle of Broaching operations. (08 Marks)
- b. What are the advantages and limitations of Broaching process? (08 Marks)
- c. Explain Briefly :
i) Super finishing process
ii) Polishing. (04 Marks)

Module-5

- 9 a. Justify the need for non-traditional machining process in today industries. (08 Marks)
- b. Explain Briefly with a neat sketch :
i) Plasma Arc Machining
ii) Electro Chemical Machining (12 Marks)

OR

- 10 a. With a neat sketch briefly explain the Abrasive Jet Machining and its advantages. (10 Marks)
- b. Briefly explain with a neat sketch, Ultra Sonic Machining and its advantages. (10 Marks)

* * * * *