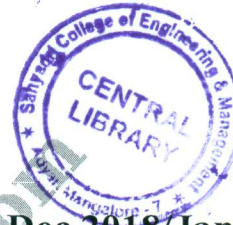


USN

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



10AU/ME45

Fourth Semester B.E. Degree Examination, Dec.2018/Jan.2019
Manufacturing Process – II

Time: 3 hrs.

Max. Marks:100

Note: Answer any FIVE full questions, selecting at least TWO full questions from each part.

PART – A

- 1 a. Differentiate between orthogonal and oblique cutting with sketches. (06 Marks)
b. With a neat sketch, give the nomenclature of single point cutting tool. (07 Marks)
c. What are the factors that affect tool-life? Briefly describe their influences. (07 Marks)
- 2 a. Briefly explain the desirable properties and purposes of cutting fluids. (07 Marks)
b. With a neat sketch, explain different heat affected zones during orthogonal cutting. (07 Marks)
c. Discuss the salient features of the following cutting tool materials:
i) CBN ii) Ceramics. (06 Marks)
- 3 a. Differentiate between a capstan and a turret lathe. (06 Marks)
b. With the help of neat sketch, explain Whitworth quick return mechanism of a shaper. (08 Marks)
c. Give the comparison between shaper and planner. (06 Marks)
- 4 a. Explain with a neat sketch of radial drilling machine. (08 Marks)
b. Sketch and explain the nomenclature of a twist drill. (04 Marks)
c. Explain with a neat sketch of basic components of CNC. (08 Marks)

PART – B

- 5 a. What is indexing? Name different methods of indexing. Briefly explain compound indexing. (10 Marks)
b. Explain the following:
i) Upmilling and down milling
ii) Face milling and end milling. (10 Marks)
- 6 a. Explain with a neat sketch the principle of working of a centre type cylindrical grinding machine. (08 Marks)
b. Explain the following grinding wheel parameters: i) Grit ii) Grade iii) Structure. (06 Marks)
c. Explain the factors to be considered for selection of grinding wheels. (06 Marks)
- 7 a. Explain briefly the honing process with a neat sketch. State its advantages and disadvantages. (10 Marks)
b. With a neat sketch, explain the lapping process. State its advantages and disadvantages. (10 Marks)
- 8 a. Explain AJM with a neat sketch. (10 Marks)
b. List out limitations and applications:
i) Laser beam machine
ii) Plasma arc machine. (10 Marks)

* * * * *

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.