

CBCS SCHEME

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15MA743

Seventh Semester B.E. Degree Examination, Jan./Feb. 2021 Process Planning

Time: 3 hrs.

Max. Marks: 80

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

Module-1

- 1 a. Define Process Planning. Write the importance of process planning and list the activities involved in it. (08 Marks)
 - b. Explain the various methods of process planning with its advantages and disadvantages.

(08 Marks)

OR

- 2 a. Explain retrieval or variant CAPP system with its procedure and advantages. (08 Marks)
 - b. Explain the factors involved in material selection and evaluation in process planning.

(08 Marks)

Module-2

Define SQC. List the seven statistical tools of quality that are used in quality control and mention their purposes. (16 Marks)

OR

4 Define process capability and list the set of documents required for process planning.

(16 Marks)

Module-3

- 5 a. Describe the classification and elements of cost in detail. (08 Marks)
 - b. Define overhead charges. Explain the different methods of allocation of overhead charges. (08 Marks)

OR

- 6 a. Define cost estimation. List the 9 factors to be considered to calculate the probable cost of the product. (08 Marks)
 - b. Differentiate between estimating and costing.

(08 Marks)

Module-4

7 150 pieces of shafts as shown in Fig.Q.7 are to be drop forged from the raw stock of forging Rs.1000/sq-m of surface area to be forged. Overhead expenses to be 100% of the cost of the forging. Consider all losses. (16 Marks)

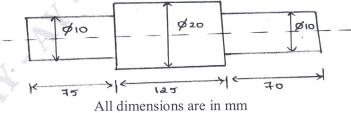


Fig.Q.7

OR

8 a. Briefly explain all the elements considered for the estimation of foundary cost.
b. Explain the elements considered for the estimation of foundry cost.
(08 Marks)
(08 Marks)

Module-5

- 9 a. With a neat diagram, explain the operations:
 - i) Angular milling
 - ii) Gang milling
 - iii) Straddle milling
 - iv) Thread milling.

(12 Marks)

b. Explain the importance of machining time operation.

(04 Marks)

OR

10 a. Estimate the machining time to turn a 3cm diameter mild steel bar 10cm long, down to 2.5cm diameter in a single cut, using high speed steel tool. Assume the cutting speed of the tool to be 30m/min and a feed of 0.4mm per revolution. (08 Marks)

b. A hallow spindle is bored to enlarge its hole diameter from 15mm to 20mm upto 80mm depth in single cut estimate the boring time, if cutting speed is 20m/min and feed is 0.25mm/rev. (08 Marks)

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