

EVENING

13 MAR 2021

[Total No. of Questions: 09]

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Uni. Roll No.

Program/ Course: **B.Tech.** (Batch 2018 onward)

Semester: 3rd

Name of Subject: **Manufacturing Processes**

Subject Code: **PCME-103**

Paper ID: 16074

Time Allowed: 03Hours

Max. Marks: 60

NOTE:

- 1) Parts A and B are compulsory
- 2) Part-C has Two Questions Q8 and Q9. Both are compulsory, but with internal choice
- 3) Any missing data may be assumed appropriately

Section – A

[Marks: 02 each]

Q1.

- a) Classify the types of extrusion.
- b) What is the HAZ in welding?
- c) What is draft allowance?
- d) Write the mechanism of shaper machine.
- e) Why are negative rake angle provided on carbide/oxide tools?
- f) What do you mean by the term Chaplets?

Section – B

[Marks: 04 each]

- Q2.** Differentiate the hot working and cold working processes.
- Q3.** What is the difference between MIG and TIG welding processes explain in detail?
- Q4.** Explain the concept of cutting tool geometry with neat sketch.
- Q5.** Determine the ratio of time for solidification of two casting as mentioned below:
 - a) Cube of side x
 - b) Cube of side 2x
- Q6.** Classifies the manufacturing processes and also write the selection criteria for manufacturing processes.
- Q7.** Define briefly in reference to machine tools: Operations of Lathe machine.

Section – C [Marks: 12 each (06 for each sub-part, if any)]

Q8. What is the principle of Rolling? Explain in detail the Rolling stand arrangement with neat sketches and also discuss various defects in Rolling.

OR

Draw Merchant Circle diagram. Write expressions of various components, coeff of friction. Also mention the names of notations used.

Q9. Explain six properties of Moulding sand which are responsible for making a good mould/casting.

OR

What is the principle of Gas welding? Explain the equipment and constructional details of Gas Welding with neat and clean diagram and also write the name of some practical applications.
