

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE- SEMESTER-IV (NEW) EXAMINATION – WINTER 2020****Subject Code:3141908****Date:19/02/2021****Subject Name:Manufacturing Processes****Time:02:30 PM TO 04:30 PM****Total Marks:56****Instructions:**

1. Attempt any **FOUR** questions out of **EIGHT** questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

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|------------|--|-----------|
| <b>Q.1</b> | (a) What is Boring Process? Compare Boring and Reaming process.  | <b>03</b> |
|            | (b) Explain Horizontal Boring Machine with neat sketch.  | <b>04</b> |
|            | (c) Explain Different Types of Broaching Machines with neat sketch.  | <b>07</b> |
| <b>Q.2</b> | (a) With the help of figure explain “Taper turning by swiveling the compound rest method                     | <b>03</b> |
|            | (b) Give the comparison between a turret lathe and capstan lathe.  | <b>04</b> |
|            | (c) Explain primary and auxiliary motions with reference to machine tool.                                    | <b>07</b> |
| <b>Q.3</b> | (a) Draw a neat sketch of single point cutting tool and show various angles on sketch                        | <b>03</b> |
|            | (b) Differentiate between multi spindle drilling machine and Gang drilling machine.                          | <b>04</b> |
|            | (c) Explain about crank and slotted link quick return mechanism in shaper machine.                           | <b>07</b> |
| <b>Q.4</b> | (a) What is dressing of grinding wheel? Which operation is required to change shape of grinding wheel?       | <b>03</b> |
|            | (b) Explain centre less internal grinding operation with neat diagram.                                       | <b>04</b> |
|            | (c) What is reamer? Explain different types of reamer.   | <b>07</b> |
| <b>Q.5</b> | (a) Give difference between Shaper and Planner.  | <b>03</b> |
|            | (b) Explain about dressing and truing of grinding wheel.   | <b>04</b> |
|            | (c) Explain Drilling and its allied operation in details with application.                                   | <b>07</b> |
| <b>Q.6</b> | (a) Enlist the operations performed on Lathe machine.  | <b>03</b> |
|            | (b) Write a short note on: “Band Sawing Machine”   | <b>04</b> |
|            | (c) With the help of figure explain ‘Hydraulic’ shaper mechanism.  | <b>07</b> |
| <b>Q.7</b> | (a) Differentiate between up milling Process and down milling Process.                                       | <b>03</b> |
|            | (b) What is indexing? Describe direct indexing, with example.  | <b>04</b> |
|            | (c) With the help of a neat sketch explain the column and knee type milling machine and name its main parts. | <b>07</b> |
| <b>Q.8</b> | (a) State the working principle of milling machine with Neat sketch.   | <b>03</b> |
|            | (b) Explain any four types of milling operations using neat sketches.  | <b>04</b> |
|            | (c) Explain any one Alignment test of milling machine with neat sketch.                                      | <b>07</b> |

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