Reg. No. \_\_\_\_\_\_\_\_\_\_\_\_\_

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**End Semester Examination – Nov / Dec – 2019**

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| **Code :** | **18ME2022** | **Duration :** | **3hrs** |
| **Sub. Name :** | **MANUFACTURING TECHNOLOGY** | **Max. Marks :** | **100** |

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| **Q. No.** | **Questions** | **Course**  **Outcome** | **Marks** |
| **PART – A (10X1 = 10 MARKS)** | | | |
| 1. | Give an example of brittle material. | CO2 | 1 |
| 2. | Which instrument is used for measuring forces during metal cutting operation? | CO1 | 1 |
| 3. | When four jaw independent chuck is used in a lathe? | CO2 | 1 |
| 4. | What is the purpose of doing knurling operation? | CO2 | 1 |
| 5. | Define drilling. | CO1 | 1 |
| 6. | State the need of reaming. | CO2 | 1 |
| 7. | Name the process in which removing of metal is done by pushing or pulling a cutting tool. | CO2 | 1 |
| 8. | Which unconventional machining process is used for preparing parts having large curved surfaces and thin sections? | CO2 | 1 |
| 9. | Write one advantage of 3D printing. | CO1 | 1 |
| 10. | Define end milling. | CO1 | 1 |

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| **PART – B (6 X 3 = 18 MARKS)** | | | |
| 11. | List the function of cutting fluids. | CO2 | 3 |
| 12. | Compare shaper with planer. | CO1 | 3 |
| 13. | List the different operations performed in drilling machine. | CO2 | 3 |
| 14. | Use of magnetic chuck in surface grinding is necessary. Justify. | CO1 | 3 |
| 15. | Identify the situation where an unconventional machining process is used. | CO2 | 3 |
| 16. | State the disadvantages of rapid tooling. | CO1 | 3 |

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| **PART – C (6 X 12 = 72 MARKS)**  **(Answer any five Questions from Q.no 17 to 23. Q.No 24 is a Compulsory Question)** |

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| 17. | Describe the nomenclature of a single point cutting tool with the aid of neat sketch. | CO3 | 12 |
| 18. | Draw a neat sketch of a centre lathe and explain its working principle. | CO3 | 12 |
| 19. | Draw a neat sketch of a column and knee type horizontal milling machine and explain its working. | CO3 | 12 |
| 20. | Draw a neat sketch of cylindrical grinder and explain its working. | CO3 | 12 |
| 21. | Describe how laser beam is used for machining. Enumerate the advantages and limitations of the process. | CO3 | 12 |
| 22. | Discuss briefly about rapid prototyping and list its advantages and its applications. | CO3 | 12 |
| 23. | Explain with neat sketches any two gear finishing process. | CO3 | 12 |
| **Compulsory:** | | | |
| 24. | With a neat sketch explain electro chemical grinding. | CO3 | 12 |