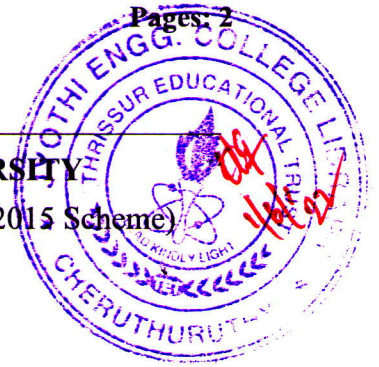


Reg No.: _____

Name: _____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

Sixth Semester B.Tech Degree (S,FE) Examination May 2022 (2015 Scheme)

**Course Code: MR308****Course Name: DIGITAL MANUFACTURING**

Max. Marks: 100

Duration: 3 Hours

PART A*Answer all questions, each carries 5 marks.*

- | | | |
|---|---|-----|
| 1 | Comment on digital inspection | (5) |
| 2 | Elucidate point to point programming | (5) |
| 3 | List out the features of ASRS | (5) |
| 4 | With neat diagram explain Encoder | (5) |
| 5 | Explain the working of vibration sensor | (5) |
| 6 | Distinguish between force sensor and vibration sensor | (5) |
| 7 | Write a short note on agile manufacturing | (5) |
| 8 | Summarize the following | (5) |
| | i. aggregate planning | |
| | ii. capacity planning | |

PART B*Answer any three questions, each carries 10 marks.*

- | | | |
|----|--|------|
| 9 | a) Comment on open loop and closed loop system | (5) |
| | b) Write a short note on computer numerical control system | (5) |
| 10 | a) Briefly explain computer aided programming concepts | (5) |
| | b) Enumerate briefly about manual programming | (5) |
| 11 | Mention the controls in CIM and explain | (10) |
| 12 | a) Describe the role of sensors in manufacturing system | (5) |
| | b) Discuss about light sensor and temperature sensor | (5) |
| 13 | Comment on vehicle management and safety automated storage systems | (10) |

PART C*Answer any two questions, each carries 15 marks.*

- | | | |
|----|---|------|
| 14 | With neat block diagram explain tool wear monitoring system | (15) |
|----|---|------|

15. a) With an example show the role of quality control in manufacturing (10)
b) Demonstrate the working of Acoustic Emission sensor (5)
- 16 With a neat block diagram explain various levels of production planning (15)
- 17 a) Explain the structure of material requirements planning (10)
b) Write a note on flexible manufacturing (5)
