**MECHANICAL ENGG.**

**Sub:- ADVANCE MANUFACTURING & CAD/CAM**

**Semester:- 6TH**

**SHORT TYPE QUESTIONS**

**CHAPTER-1**

1. Define plasma and what are the gases used for PAM.
2. Define Electro chemical machining process.
3. What do you understand by the term non conventional machining process?
4. Name some non-conventional machining process.
5. Define LASER.
6. Name the abrasives used in AJM.
7. Differentiate between conventional & non conventional machining process.
8. What is EDM?

**CHAPTER-2**

1. Define automation.

**CHAPTER-3**

1. What is NC system?
2. What is adaptive control?
3. Define work zero.
4. What is CNC?
5. What is DNC?

**CHAPTER-4**

1. Define robot.
2. State the fields of applications of robots.
3. What is the use of sensors?

**CHAPTER-5**

1. Define FMS.

**CHAPTER-6**

1. Define CIM.
2. Define CAD.
3. Define CAM.

**LONG TYPE QUESTIONS**

**CHAPTER-1**

1. Describe the working principle of PAM with neat sketch.
2. Write down the relative advantages and disadvantages of PAM.
3. Explain with neat sketch the working principle, advantages & applications of Electro discharge machining.
4. Describe in detail about electron beam machining process.
5. State various applications of ECM.
6. State the principle of producing laser beam.
7. Describe with neat sketch about Abrasive jet machining process.
8. Discuss the basic needs of Non conventional machining process.
9. Classify the different Non conventional machining processes.

**CHAPTER-2**

1. What are the different types of automation?
2. Explain the need of automation.

**CHAPTER-3**

1. Explain CNC with block diagram.
2. Explain various component of NC system.
3. Explain preparatory function and G code along with miscellaneous function and M code.
4. Write down the components of DNC system.
5. Explain with a neat sketch point to point & straight cut NC co-ordinate system.
6. Differentiate between NC,CNC& DNC systems.

**CHAPTER-4**

1. Describe the main components of Robot.
2. Describe the different configuration of Robotics with neat sketch.
3. Explain the different sensors used in robot.
4. Explain the accuracy and repeatability of a robot.
5. Discuss various types of end effectors.

**CHAPTER-5**

1. Explain different components of FMS.
2. What is an AGVS? What are its functions?

**CHAPTER-6**

1. Differentiate between CAD and CAM.
2. State the benefits of CAD & CAM.
3. Explain briefly about CAD software & hardware.
4. Explain CIM hardware & software.