

**DRONACHARYA COLLEGE OF ENGINEERING**  
**KHENTAWAS, FARRUKHNAGAR, GURGAON**  
**Department of Mechanical Engineering**

Subject: **MANUFACTURING TECHNOLOGY-II (ME-309-F)**

Faculty Name: **Mr. SUDHAKAR S**

**IMPORTANT QUESTIONS.**

- 1.* What is chip formation and it is classified? With neat sketch explain different types of chips formation.
- 2.* Explain the influence of Nozzle geometry in case of Abrasive Jet Machining.
- 3.* Explain Process parameters that affect MRR in Electro Chemical Machining (ECM).
- 4.* Write a short note on Rake angle and Relief angle used in single point cutting tool?
- 5.* What is the difference between orthogonal cutting and conventional cutting?
- 6.* List the various types of clamping devices and explain any two with neat diagram
- 7.* What is mean by Merchant circle diagram with respect to cutting force in machining?
- 8.* Explain the parameters Cutting speed, cutting feed, Depth of cut and surface finish in metal cutting operations.
- 9.* What is the Working principal of abrasive jet machining?
- 10.* Explain the role of electrolyte in Electro chemical machining (ECM)?
- 11.* With a neat sketch, explain Ultrasonic machining (USM) process and discuss the effects of the following parameters on material removal rate (MRR) as applied to USM process
  - a.* Amplitude and frequency of vibrations
  - b.* Grain size
- 12.* Give the differences between traditional and non-traditional machining processes and with a neat sketch, explain the Electro chemical machining (ECM) process.
- 13.* With a neat sketch, explain abrasive jet machining (AJM) and list the variables which affect the material removal rate (MRR) in AJM and explain any three with suitable graph.
- 14.* With a schematic block diagram, explain Machine control unit (MCU) of CNC machine tool and explain the following.
  - a.* Automatic palette changer.
  - b.* Automatic work piece changer.
- 15.* With a neat sketch, explain how the electron beam is generated in the Electron beam machining (EBM) and Mention the advantages, disadvantages and application of EBM

- 16.** With a neat sketch, explain the mechanism of material removal in laser beam machining (LBM) process and Mention the advantages, disadvantages and application of LBM
- 17.** Describe the main features of CNC machines which distinguish them from conventional machine tools.
- 18.** Define CNC and DNC. With a help of a diagram explain the working of NC machine tool.
- 19.** What is the tool life equation and state the factor affecting the tool life.
- 20.** Differentiate between Cellular manufacturing and flexible manufacturing system.
- 21.** What is mean by Computer aided process planning? Explain its salient features.
- 22.** Define Group technology? Enumerate its advantages and disadvantages.
- 23.** Describe the main features of CNC machines which distinguish them from conventional machine tools.
- 24.** List and explain the factors that contribute to poor surface finish in the Turning process.
- 25.** In modern manufacturing, which types of metal chips would be undesirable and Why?