

Unit-1

Metal Cutting

1. Metal cutting is a process of removing material in the form of:

- A) Powder
- B) Chips
- C) Dust
- D) Pellets

2. The angle between the rake face and a plane perpendicular to the cutting velocity is called:

- A) Clearance angle
- B) Wedge angle
- C) Rake angle
- D) Cutting angle

3. Which tool is commonly used for turning operations?

- A) Milling cutter
- B) Single-point cutting tool
- C) Drill bit
- D) Grinding wheel

4. The primary purpose of cutting fluid is to:

- A) Increase tool wear
- B) Cool and lubricate the cutting zone
- C) Reduce machine speed
- D) Increase chip thickness

5. Orthogonal cutting involves:

- A) Multiple cutting edges
- B) Cutting edge inclined to feed direction
- C) Cutting edge perpendicular to cutting velocity
- D) No chip formation

6. Which material is widely used for cutting tools?

- A) Wood
- B) Plastic
- C) High-Speed Steel (HSS)
- D) Rubber

7. The unwanted wear occurring on the flank face is called:

- A) Crater wear
- B) Flank wear
- C) Edge wear
- D) Thermal wear

Answer: B) Flank wear

8. Tool life generally decreases with an increase in:

- A) Cutting speed
- B) Coolant flow
- C) Tool hardness
- D) Rake angle

9. Merchant's theory is related to:

- A) Tool design
- B) Chip formation
- C) Machine maintenance
- D) Lubrication

10. Which of the following is a cutting parameter?

- A) Feed
- B) Color
- C) Weight
- D) Shape

Fill in the Blanks

1. Material removed during machining is called a _____.

Answer: Chip

2. The process of removing excess material from a work piece is called _____.

Answer: Machining

3. A turning operation is generally performed on a _____ machine.

Answer: Lathe

4. The angle provided to avoid rubbing between tool and work piece is called _____ angle.

Answer: Clearance

5. High-Speed Steel is commonly abbreviated as _____.

Answer: HSS

6. The three basic cutting parameters are speed, feed, and _____.

7. Wear occurring on the rake face is known as _____ wear.

8. Cutting fluid acts as a coolant and _____

9. In orthogonal cutting, the cutting edge is _____ to the cutting velocity.

10. Tool life decreases when cutting _____ increases.