MF 5104 Metal Cutting Theory and Practice

Important 2 Mark Questions

Unit I

1. State the difference between continuous chip and discontinuous chip.
2. Mention the importance of shear angle in metal-cutting operation.
3. Mention the function of chip breaker.
4. List the assumptions made in theory of Merchant.
5. List out the types of chips?
6. What is the function of chip breakers?
7. What are the uses of chip breaker?
8. What do you mean by oblique cutting?

Unit II

1. Enlist the terms that are commonly used to define the shape of a metal cutting tool.
2. Define climbing milling and compare it with conventional milling.
3. Enlist any one example for single point cutting two point cutting and multipoint cutting tools.
4. Mention the relative characteristics of climb milling and conventional milling and their importance in machining operations.
5. What is Built-Up Edge?
6. Write the expression for shear angle with respect to and rake angle and chip thickness coefficient?
7. Write the examples for multi-point cutting tool.
8. Write short notes on milling cutter.

Unit III

1. Mention the locations where heat is produced in an orthogonal cutting operation.
2. List the functions served by cutting fluids.
3. Why the maximum temperature in cutting is located at about the middle of the tool-chip interface?
4. Enlist the conditions for discouraging the use of cutting fluids.
5. Sketch the forces during turning.
6. What are the requirements of a dynamometer for measuring forces in cutting?
7. Classify cutting fluids.
8. What is meant by temperature rise in machining?

Unit IV

1. How is tool life defined?
2. What is meant by machinability?
3. Define hot hardness of cutting tool material.
4. Enlist the methods to improve the machinability.
5. What are the sources of heat generation in machining?

6. State the important functions of cutting fluids.
7. Mention some tool materials.
8. List the types of inserts.

Unit V

1. What are the possible impacts of the tool wear?
2. List the reasons for chatter in machining.
3. List the factors on which the rate of tool wear depends.
4. Mention the adverse effects of vibrations and chatter in machining.
5. Define machinability.
6. What is crater wear?
7. Write short notes on chatter in machining.
8. How to calculate wear rate?