

Roll No. ....

**24169**

**B. Tech. (Mech. Engg.) 4th Sem. (Re-appear)**

**Examination – October, 2020**

**MANUFACTURING TECHNOLOGY - I**

**Paper : ME-202-F**

***Time : 1.45 Hours ]***

***[ Maximum Marks : 100***

*Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.*

**Note :** Attempt any *three* questions. All questions carry equal marks.

**1.** Explain the following :

- (a) Go and not Go gauges.
- (b) Rolling defects.
- (c) Taylor's equation of tool life.
- (d) What is function of sine bar ?
- (e) Define fettling in casting.

- (f) Function of core.
  - (g) What do you mean by crater wear ?
  - (h) Name various welding defects.
  - (i) Thermit welding.
  - (j) List the operations performed on lathe machine.
2. Explain the elements of machining cost. Discuss the geometry of single point cutting tool.
3. (a) Discuss the nomenclature of single point cutting tool with various tool elements.
- (b) A work piece is being cut at 1.25m/s and power is found to be 2.05 KW. The feed is 0.25 mm/rev. and the depth of cut is 5 mm. Estimate :
- 1. Cutting force in N.
  - 2. Unit power consumption.
4. (a) With the help of neat diagram. explain types of milling fixtures.
- (b) Explain principle of location of jigs and fixtures.
5. Write short notes on :
- (a) Mechanical Comparator
  - (b) Screw Gauge
  - (c) Surface finish and its measurement
6. (a) Explain the different types of sand casting defects and their remedies.
- (b) What are the various types of tools and equipments used in foundry ?
7. (a) Discuss the principle, main parts and applications of turret and capstan lathe.
- (b) What is a planner ? Illustrate and describe it's working principle..
8. Explain the working principle of electro slag welding. Differentiate between brazing and soldering.
9. Differentiate between :
- (a) Blanking and punching
  - (b) Hot and cold extrusion with neat sketches