

Time: 3 Hours

[Total Marks: 80 ]

**N.B.** A. Question no.1 is compulsory.

B. Attempt any three questions out of remaining five questions

C. Figures to right indicates full marks

1. Solve any Four:

[20]

- a) What are Transfer machines?
- b) Explain Rolling defects.
- c) How is rod made by extrusion?
- d) With neat sketch explain the working principle of plastic injection moulding process
- e) Differentiate Shaper and Planner

2. a) Differentiate the following:

[10]

- i) Pattern and core boxes.
- ii) Lapping and Honing
- b) Differentiate between TIG & MIG welding.

[5]

c) Differentiate between soldering & brazing.

[5]

3. a) Explain rotary swaging with its sketch.

[6]

b) Describe Calendaring process for plastic with a neat labeled sketch.

[6]

c) How are Milling Machines classified with a neat sketch? Describe any one Milling Machine.

[8]

4. a) Explain centreless grinding operation

[5]

b) Differentiate between core and core print.

[5]

c) What is meant by riser? State the functions of riser.

[5]

d) Discuss friction welding with its applications.

[5]

5. a) State various vertical machining centres. Describe any one in detail

[8]

b) Differentiate between open loop and closed system in CNC machines.

[6]

c) Explain vacuum forming process of polymers.

[6]

6. a) What is meant by forging? Differentiate closed and open die forging.

[5]

b) Write Short note on following:

[10]

i) Machine Tools Classification

ii) Automatic machines

c) Compare transfer moulding and compression moulding.

[5]

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