

30/5/2023

Duration: 3 Hours

Total Marks- 80

NB:

- 1) First Question (Q.1) is Compulsory.
- 2) Attempt any 3 questions from the remaining 5 (Q.2 - Q.6) questions.
- 3) Figures to the right indicate full marks
- 4) Proportionate and labelled free-hand sketches would do

Q. 1 Solve any Four out of Six.

- a) Explain types of gates.
- b) Differentiate between soldering and brazing.
- c) Explain selection of grinding wheel.
- d) Explain Internet of Things.
- e) Discuss Electro-chemical machining.
- f) Various steps involved in powder metallurgy.

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Q. 2 a) Draw and explain Geometry of a Single Point Cutting Tool.
b) Draw and explain screw type injection moulding process with its advantages, Limitations and applications.

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Q. 3 a) Explain working, advantages and limitations of ultrasonic machining.
b) Draw and explain significance of various elements of gating system in sand casting.

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Q. 4 a) Draw and explain in brief the various welding defects their causes and remedies.
b) Describe the types of drilling machine and their application.

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Q. 5 a) Explain working of Submerged Arc Welding with its applications, advantages and limitations.

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b) Draw and explain in brief the various rolling defects their causes and remedies.

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Q. 6 Write short notes on (Any four)

- a) Compare wood and metal as pattern materials.
- b) Classify Production Processes..
- c) Quick return mechanism on shaper.
- d) Open die and Closed die forging.
- e) CO2 Shell Moulding Process.
- f) Cloud manufacturing.