

25/11/2022

Duration: 3 Hours

- 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.** **20**
- a) Differentiate between Hot working and Cold working.
 - b) Discuss the different types of flames in gas welding.
 - c) Explain gear hobbing process.
 - d) Explain Internet of Things.
 - e) Discuss electric discharge machining.
 - f) Classify Production Processes.
- Q. 2 a)** In a cutting test with 0.3mm flank wear as tool failure criterion, a tool life of **08**
10 min was obtained at a cutting velocity of 20 m/min taking tool life
exponent as 0.25, tool life in min at 40 m/min find cutting velocity.
- b)** Draw and explain plunger type injection moulding process with its advantages, **12**
Limitations and applications.
- Q. 3 a)** Explain working, advantages and limitations of laser beam machining. **10**
- b)** Draw and explain significance of various elements of gating system in sand **10**
casting.
- Q. 4 a)** Draw and explain in brief the various welding defects their causes and remedies. **10**
- b)** Draw and explain various operations perform on lathe machine. **10**
- Q. 5 a)** Differentiate between TIG and MIG welding. **10**
- b)** Draw and explain in brief the various rolling defects their causes and remedies. **10**
- Q. 6 Write short notes on (Any four)** **20**
- a) Various pattern allowances.
 - b) Various steps involved in powder metallurgy.
 - c) Knee type horizontal milling machine.
 - d) Open die and Closed die forging.
 - e) Investment Casting.
 - f) Cloud manufacturing.
