

Duration: 3 Hours

Total Marks- 80

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

Q1. Write a short note on (Any four)

20

- (a) Types of Risers.
- (b) Hot working process.
- (c) Hybrid Joining process.
- (d) Thermoplastic plastic.
- (e) Internet of things (IoT) in manufacturing.

Q2. (a) Write short note on broaching machine and compare of lapping and honing operation.

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(b) Write difference between arc welding and gas welding.

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Q3. (a) What are the five major steps in casting? Discuss casting defects with causes and remedies.

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(b) Explain various sheet metal operations with neat sketches.

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Q4. (a) Explain various super finishing operations.

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(b) Explain steps involved in powder metallurgy process.

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Q5. (a) Describe gear milling process.

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(b) Explain polymer moulding techniques.

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Q6. (a) What are different sheet metal operations? Explain briefly any two of them.

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(b) Explain cloud manufacturing.

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