



University School of Automation and Robotics
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<http://ipu.ac.in/eastcampusmain.php>

Subject Name: Introduction to Manufacturing Processes
Subject Code: 1CT-116

Max Marks: 30
Duration: 1hr

Mid Term
2nd Semester Examination
June 2022

Group A-

Compulsory question of 10 marks.

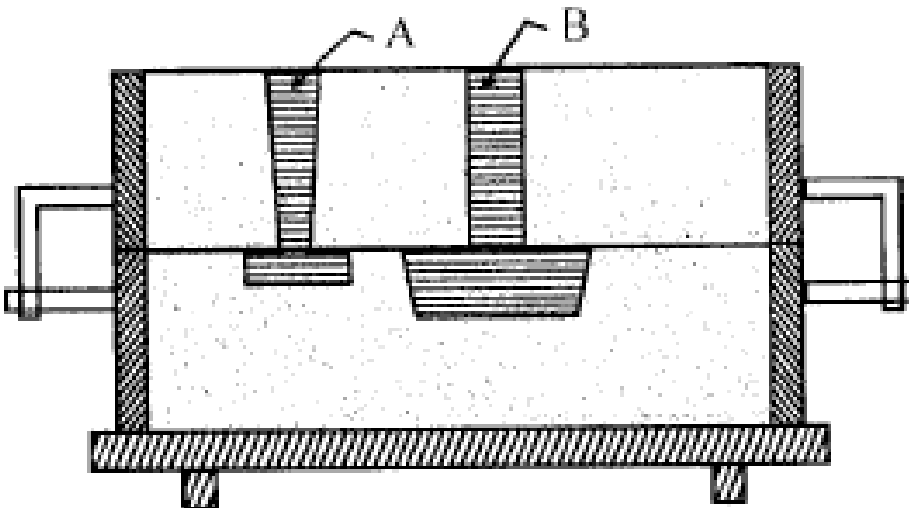
1. Which one of the following processes produces a casting when pressure forces the molten metal into the mould cavity?

- | | |
|--------------------|------------------------|
| (a) Shell moulding | (b) Investment casting |
| (c) Die casting | (d) Continuous casting |

2. Shell moulding can be used for:

- | |
|--|
| (a) Producing milling cutters |
| (b) Making gold ornaments |
| (c) Producing heavy and thick walled casting |
| (d) Producing thin casting |

3. A sand-casting mould assembly is shown in the above figure. The elements marked A and B are respectively



- | |
|----------------------|
| (a) Sprue and riser |
| (b) Ingate and riser |

- (c) Drag and runner
- (d) Riser and runner

4. Shrinkage allowance is made by

- (a) Adding to external and internal dimensions
- (b) Subtracting from external and internal dimensions
- (c) Subtracting from external dimensions and adding to internal dimensions
- (d) Adding to external dimensions and subtracting from internal dimensions

5. The main purpose of chaplets is

- (a) To ensure directional solidification
- (b) To provide efficient venting
- (c) For aligning the mold boxes
- (d) To support the cores

6. The maximum heat in resistance welding is at the

- (a) Tip of the positive electrode
- (b) Tip of the negative electrode
- (c) Top surface of the plate at the time of electric contact with the electrode
- (d) Interface between the two plates being Joined

7. Which one of the following is not an electric resistance method of welding?

- (a) Electro slag welding
- (b) Percussion welding
- (c) Seam welding
- (d) Flash welding

8. The ratio between Oxygen and Acetylene gases for neutral flame in gas welding is

- (a) 2 : 1
- (b) 1 : 2
- (c) 1 : 1
- (d) 4 : 1

9. The welding process in which bare wire is used as electrode, granular flux is used and the process is characterized by its high-speed welding, is known as:

- (a) Shielded arc welding
- (b) Plasma arc welding
- (c) Submerged arc welding
- (d) Gas metal arc welding

10. In arc welding, the arc length should be equal to

- (a) 4.5 times the rod diameter
- (b) 3 times the rod diameter
- (c) 1.5 times the rod diameter
- (d) Rod diameter

Group B-

This section comprises of 3 questions. Attempt any 2 questions from this section. Every question carries 10 marks each.

- 1. Explain the three types of oxy-acetylene flames. Indicate with the help of sketches the various zones, respective temperature ranges and applications of each type of flame?**
- 2. What is permeability? Permeability is more important in the basic process of sand casting than porosity. Give one important reason for this feature.**
- 3. What are the types of Patterns. Briefly discuss about the pattern allowances.**