### Assignment 12

Due on 2019-10-23, 23:59 IST.

#### Course Outline
- How to access the portal?
- Week 3: Prerequisites
  - Introduction to Manufacturing Processes
  - Manufacturing Processes
  - Conventional Machining
  - Advanced Machining
- Week 4: Metal Forming
  - Casting
  - Forging
- Week 5: Welding
  - Principles of welding
  - Welding processes
- Week 6: Heat Treatment
  - Heat treatment processes
- Week 7: Machining
  - CNC Machining
- Week 8: Metal Forming
  - Casting
  - Forging
- Week 9: Welding
  - Principles of welding
  - Welding processes
- Week 10: Heat Treatment
  - Heat treatment processes
- Week 11: Microstructure of Materials
  - Microstructure of metals
- Week 12: Processing of Non-Metallic Materials
  - Processing of polymers
  - Processing of ceramics

#### Questions

1. What is the best economical method for joining components?
   - Electron beam welding
   - Laser beam welding
   - Friction welding
   - Fricion welding
   - No, the answer is incorrect.
   - Accepted Answer: Electron beam welding

2. Which one of the following welding processes of thermoplastics follows the principle of dielectric hysteresis losses?
   - Ultrasonic welding
   - Resistance welding
   - Radio-frequency welding
   - Laser beam welding
   - No, the answer is incorrect.
   - Accepted Answer: Ultrasonic welding

3. For the manufacturing of glass, what is the correct sequence of operations?
   - Melting - Forming - Shaping - Annealing
   - Annealing - Forming - Shaping - Melting
   - No, the answer is incorrect.
   - Accepted Answer: Melting - Forming - Shaping - Annealing

4. For joining of dissimilar plastic to metal, which one of the following processes is NOT suitable?
   - Adhesive bonding
   - Laser beam welding
   - Resistance welding
   - No, the answer is incorrect.
   - Accepted Answer: Adhesive bonding

5. In which one of the welding processes, the cooling should follow very slowly?
   - Braze welding
   - Spot welding
   - Laser beam welding
   - Gas welding
   - No, the answer is incorrect.
   - Accepted Answer: Gas welding

6. Which one of the following types of materials, the welding process occurs during fusion operation?
   - Ceramics
   - Titanium and alloys
   - Polymers materials
   - Superalloys
   - No, the answer is incorrect.
   - Accepted Answer: Ceramics

7. Which of the following welding processes can be used to weld different glass materials, such as, fused silica, borosilicate glass and ultra-low expansion glasses?
   - Glass welding
   - Fusion welding
   - Ultra short pulse laser welding
   - No, the answer is incorrect.
   - Accepted Answer: Glass welding

8. Which of the following welding processes is suitable for highly transparent material?
   - Electron Beam Welding
   - Ultrasonic Pulse Laser Welding
   - Friction Welding
   - Laser Welding
   - No, the answer is incorrect.
   - Accepted Answer: Ultrasonic Pulse Laser Welding