Assignment 8

The due date for submitting this assignment has passed. As per our usual procedures, you have received this notification.

1. Using the prominent testing method, the type of defects that can be observed is:
   - Internal voids
   - Surface cracks
   - Shape distortion
   - All of the above
   - Yes, the answer is incorrect.
   - Correct Answer: All of the above

2. Race improvisation means:
   - Pilling phenomenon caused by the metal
   - Pilling phenomenon caused by the metallic layer
   - Bending and cutting the metallic layer
   - Yes, the answer is incorrect.
   - Correct Answer: Bending and cutting the metallic layer

3. Rolling: After the formation of imperfections:
   - Pilling phenomenon caused by the metal
   - Pilling phenomenon caused by the metallic layer
   - Rolling phenomenon caused by the metallic layer
   - Yes, the answer is incorrect.
   - Correct Answer: Rolling phenomenon caused by the metallic layer

4. Packing treatment means cleaning the casting with:
   - Ether and alkali
   - Water and alkali
   - Solvent
   - Yes, the answer is incorrect.
   - Correct Answer: Ether and alkali

5. Medium is a casting defect which arises due to:
   - Very high impurities in the raw material
   - Insufficient fluidity of the molten metal
   - Absorption of gases by the liquid metal
   - Improper alignment of the cast units
   - Yes, the answer is incorrect.
   - Correct Answer: Insufficient fluidity of the molten metal

6. Two issues of liquid metal which are not hot enough to fuse properly result in a casting defect known as:
   - Cold shut
   - Coincide
   - Solid shut
   - Yes, the answer is incorrect.
   - Correct Answer: Coincide

7. The best treatment for a metal casting is due to:
   - High quality
   - Casting solid grain size
   - Poor quality of ladle
   - Inadequate cast size
   - Yes, the answer is incorrect.
   - Correct Answer: High quality

8. Which of the following treatments does not improve hardness?
   - Quenching
   - Normalizing
   - Tempering
   - Annealing
   - Yes, the answer is incorrect.
   - Correct Answer: Tempering

Match the following heat treatment methods of Column I with appropriate working conditions given in Column II.

<table>
<thead>
<tr>
<th>Column I</th>
<th>Column II</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normalizing</td>
<td>1. Heating components to a temperature range 100-150°C for a suitable period</td>
</tr>
<tr>
<td>Quenching</td>
<td>2. Heating casting to austenitic temperature, holding and then quenching rapidly</td>
</tr>
<tr>
<td>Tempering</td>
<td>3. Heating casting to austenitic temperature, holding and then cooling in air</td>
</tr>
<tr>
<td>Annealing</td>
<td>4. Heating casting to austenitic temperature, holding and then cooling in furnace</td>
</tr>
</tbody>
</table>

- A-C, B-D, C-A, D-B
- A-C, D-B, C-A, B-D
- A-B, C-D, A-B, C-D
- A-B, C-D, D-B, A-C

- Yes, the answer is incorrect.
- Correct Answer: A-C, D-B, C-A, B-D

The correct reasons for the occurrence of hot tear in casting among the following reasons will be:
1. Filtration of casting occurring immediately after metal has solidified
2. Poor conductivity of metal and cast
3. The high pouring temperature
4. Yes, the answer is incorrect.
   - Correct Answer: 1, 3

Which of the following statement regarding heat treatment of cast iron are true:
1. Preheating annealing decreases the graphitic carbon in white cast iron
2. The machinability of grey iron decreases by annealing treatment
3. Continuous decomposition is graphite during normalizing treatment of white cast iron
4. Yes, the answer is incorrect.
   - Correct Answer: 2, 3