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# Unit 9 - Week 8

Course outline

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- Lecture 30 : Pearlite Transformation
- Lecture 31 : Martensite Transformation -I
- Lecture 32 : Martensite Transformation -II
- Lecture 33 : Tempering of Martensite
- Lecture 34 : Bainite Transformation
- Quiz : Week 8 Assignment 8

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## Week 8 Assignment 8

**The due date for submitting this assignment has passed.** **Due on 2016-03-15, 23:55 IST.**

**Submitted assignment**

1) Diffusion less transformation is ----------transformation ***2 points***

- Martensite
- Pearlite
- Bainite
- All

**No, the answer is incorrect.**
**Score: 0**

**Accepted Answers:**
*Martensite*

2) Carbon concentration in Hypo and Hyper eutectoid steel are----------respectively. ***2 points***

- 0.2 and 0.8
- Less than 0.8 and greater than 0.8
- 0.8 and 1
- None

**No, the answer is incorrect.**
**Score: 0**

**Accepted Answers:**
*Less than 0.8 and greater than 0.8*

3) Sharp edge of shaving blade made of ----------Steel. ***2 points***

- Hypoeutectic steel
- Low carbon Steel
- Hypereutectic steel
- All Above

**No, the answer is incorrect.**
**Score: 0**

**Accepted Answers:**
*Hypereutectic steel*

4) The treatment in which the brittleness of martensite is reduced is called which one of the following ***2 points***

- Aging
- Annealing
- Austenitizing

Week 13

Assignment Solutions

- Tempering

**No, the answer is incorrect.**
**Score: 0**

**Accepted Answers:**
*Tempering*

5) Which one produces the most rapid cooling rate in the following? ***2 points***

- Air
- Brine
- Oil
- Pure water

**No, the answer is incorrect.**
**Score: 0**

**Accepted Answers:**
*Brine*

6) Tempering is a heat treatment applied to hardened steels that is best defined as which of the following (one correct answer): ***2 points***

- heating and soaking at a temperature above the austenitizing level followed by rapid cooling
- heating and soaking at a temperature above the austenitizing level followed by slow cooling
- heating and soaking at a temperature below the austenitizing level followed by rapid cooling
- heating and soaking at a temperature below the austenitizing level followed by slow cooling

**No, the answer is incorrect.**
**Score: 0**

**Accepted Answers:**
*heating and soaking at a temperature below the austenitizing level followed by slow cooling*

7) Martensite can best be defined as which one of the following ***2 points***

- A mixture of ferrite and carbide phases obtained by rapid cooling of austenite
- A mixture of ferrite and carbide phases obtained by slow cooling of austenite
- A phase consisting of an iron-carbon solution whose composition is the same as the austenite from which it was derived
- A solution of cementite in ferrite obtained by rapid cooling of austenite

**No, the answer is incorrect.**
**Score: 0**

**Accepted Answers:**
*A phase consisting of an iron-carbon solution whose composition is the same as the austenite from which was derived*

8) Which transformation start after nucleation of ferrite phase? ***2 points***

- Martensite transformation
- Pearlite Transformation
- Bainite Transfromation
- All

**No, the answer is incorrect.**
**Score: 0**

**Accepted Answers:**
*Bainite Transfromation*

9) Which of the following factors increases hardenability of a metal? ***2 points***

- Heat treatment
- Alloying elements
- High Carbon content
- Fine grain size

**No, the answer is incorrect.**
**Score: 0**

**Accepted Answers:**
*Alloying elements*

10) Which statement is true for martensite transformation? ***2 points***

- The cooling temperature must sufficiently low in order to prevent carbon diffusion.
- Martensite transformation start at certain low temperature range, the transformation is termed athermal transformation i.e. temperature-dependent transformation.
- As long as the temperature is maintained, there will be no further martensite transformation
- All Above

**No, the answer is incorrect.**
**Score: 0**

**Accepted Answers:**
*All Above*

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