

11. Heat Treatment

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Question Paper

Duration: 30 Mins

Total Marks: 14

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Student Name: _____ Roll No: _____

1. How much time is allowed normally in soaking zone for a 10mm thick metal piece while hardening?

- A) 10 minutes
- B) 15 minutes
- C) 5 minutes
- D) 20 minutes

2. What is the purpose of tempering a steel?

- A) To increase the hardness
- B) To reduce the brittleness
- C) To increase the brittleness
- D) To remove the ductility

3. What is the name of the heat treatment process, where the metal is heated and quenched in water or oil?

- A) Normalising and Tempering
- B) Annealing
- C) Hardening
- D) Tempering

4. What are the various stages of heat treatment?

- A) Quenching, Cooling and Heating
- B) Heating, Soaking and Quenching
- C) Heating, Cooling and Quenching
- D) Soaking, Quenching and Cooling

5. Which heat treatment process is done to refine the grain structure of the steel?

- A) Normalising
- B) Tempering
- C) Annealing
- D) Hardening

6. Which is a kind of surface hardening process?

- A) Ferrite
- B) Tempering
- C) Cementite
- D) Nitriding

7. What is colour of a metal piece when heated to 250 Degree C while doing the tempering process?

- A) Pale
- B) Blue
- C) Brown
- D) Purple

8. What is the name of the structure formed, if a steel is heated for about 723 Degree C?

- A) Ferrite
- B) Martensite
- C) Austenite
- D) Cementite

9. Which is the suitable nitriding process for all alloyed and unalloyed steels?

- A) Gas nitriding
- B) Nitriding in Quenching tank
- C) Nitriding in salt-bath
- D) Silver nitriding

10. Which process steel is heated in a carbonaceous atmosphere for the penetration of carbon?

- A) Induction hardening
- B) Nitriding
- C) Carburising
- D) Case hardening

11. What are the various types of heat treatment processes?

- A) Normalising, Heating, Cooling and Painting
- B) Hardening, Soaking, Painting and Packing
- C) Annealing, Normalising, Hardening and Tempering
- D) Tempering, Cooling, Packing and Soiling

12. Which process produce equilibrium conditions?

- A) Annealing and Hardening
- B) Annealing and Normalising
- C) Normalising and Tempering
- D) Normalising and Tempering

13. What is the name of heat treatment process done to relieve strain and stress?

- A) Annealing
- B) Normalising
- C) Tempering
- D) Hardening

14. What is the process of heat treatment?

- A) The process of heating and bending as per our requirement
- B) The process of heating to change the dimensions
- C) The process of cooling to measure the dimensions
- D) The process of heating and cooling to change the structure and properties