

12:24 PM

Dr. J. J. Magdum ITI college
sambhajipur

February 2026

Answer Key

Duration: 60 Mins

Total Marks: 17

Q.ID: ITISKILL2289EL

1. 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) Cementide

Answer: C) Austenite

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

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

Answer: D) Annealing

3. What is the name of the point at which all the weight of the body concentrated?

- A) Initial point
- B) Centroid
- C) Central point
- D) Centre of gravity

Answer: D) Centre of gravity

4. Where the centre of gravity of a circle lies?

- A) Any where on its radius
- B) Any where on its diameter
- C) Any where on its circumference
- D) At its centre

Answer: D) At its centre

5. Which process produce equilibrium conditions?

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

Answer: A) Annealing and Normalising

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

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

Answer: A) 5 minutes

7. What is the purpose of tempering a steel?

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

Answer: C) To reduce the brittleness

8. What are the various stages of heat treatment?

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

Answer: A) Heating, Soaking and Quenching

9. Which affects the centre of gravity of the object?

- A) Weight
- B) Density
- C) Mass
- D) Shape

Answer: C) Mass

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

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

Answer: A) Brown

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

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

Answer: C) Normalising

12. What is the process of heat treatment?

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

Answer: B) The process of heating and cooling to change the structure and properties

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

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

Answer: D) Hardening

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

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

Answer: C) Carburising

15. Which is a kind of surface hardening process?

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

Answer: B) Nitriding

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

- A) Nitriding in Quenching tank
- B) Gas nitriding

C) Nitriding in salt-bath D) Silver nitriding

Answer: C) Nitriding in salt-bath

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

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

Answer: A) Annealing, Normalising, Hardening and Tempering
