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Select one:

- a.]moderate
- b. slow
- c. Very fast
- d. no matter

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A result of the formation of a Ms-like structure

Select one:

- a. Mo and Cerium
- b. Mg and Cerium
- c. Mn and Mo
- d. Adding Mn and Cerium

Previous page

Clear my choice

The temperature of the formation of martensite in the CCT.

Select one:

- a. is shifted to the right
- b. is less than that for TTT diagram
- c. is the same as for TTT diagram
- d. is more than that for TTT diagram

The crystalline structure of α-non magnetic, and α- magnetic are:

Select one:

- a. FCC, BCC repectively
- b. BCC, BCC repectively
- c. BCC, FCC respectively
- d. FCC, FCC respectively

1. ***The limitation of the phase diagram for heat treatment purposes is that***

Select one:

- a. Austenite does not exist at room temperature
- b. it is used only for plain carbon steel
- c. it does not show the bainite
- d. it does not show the effect of cooling rate

Clear my choice

3 Dendrite can be seen clearly in the microstructure of the castings if the alloy:

Clear my choice

Question 3

Not yet answered

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Flag question

Weldability of Plain carbon steel, medium, and High carbon steels are:

Select one:

- a. Good, fair, poor respectively
- b. Good, poor, fair respectively
- c. Good, fair, fair respectively
- d. Fair, good, poor respectively

Clear my choice

Question 4

Tensile strength (TS) of steel can be predicted for the steel with a composition till eut

Question 3

Not yet answered

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Flag question

Which one of the following is not correct

Select one:

- a. Austenite has FCC structure
- b. Martensite is a solid solution of carbon in BCC iron
- c. The martensite which is formed during quenching is too brittle
- d. Martensite has a BCC structure

Question 4

Not yet answered

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Flag question

If the nose of the TTT diagram for an alloy is at the zero time line,

Select one:

- a. it is impossible to harden it
- b. It is difficult to harden it
- c. Special furnace is needed to harden it
- d. It would be easy to harden it

Question 5

Answer saved

Annealing temperature is:

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6. *The overaging mechanism in Al-Cu alloys is.*

Select one:

- a. A result of Alpha phase formation
- b. A result of the perfection in the lattice
- c. A result of the formation of a Ms-like structure
- d. A result of the distortion in the lattice

Next page

TTT diagram | combinepdf.pdf | Final exam metallurgical proces | Non Equilibrium Heat Trea | New tab

https://lmsystem.ju.edu.jo/mod/quiz/attempt.php?attempt=580313&cmid=272732&page=3

Question 17
Not yet answered
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Flag question

The recommended heat treatment process for the hacksaw is:

Select one:
- a. hHardening
- b. annealing
- c. Normalizing
- d. Normalizing+harening

Clear my choice

Question 18
Not yet answered
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Flag question

If the nose of the TTT diagram for an alloy is at the zero time line

Select one:
- a. It is difficult to harden it
- b. Special furnace is needed to harden it
- c. it is impossible to harden it
- d. It would be easy to harden it

Question 19

Type here to search

- c. It is Ferrite and Cementite! It's just acicular
- d. It is a solid solution of iron and carbon

Clear my choice

The hardenability is not affected by

Select one:

- a. air
- b. critical cooling rate
- c. quenching medium and method of
- d. chemical composition of steel

Clear my choice

page

exam Metallurgy

Jump to...

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Question 3

Not yet answered

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Flag question

The fastest cooling rate is achieved when steel is quenched in

Select one:

- a. air
- b. water
- c. oil
- d. brine

Clear my choice

Question 4

Not yet answered

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Flag question

Dendrite can be seen clearly in the microstructure of the castings if the alloy

Select one:

- a. is radio active
- b. has impurity atoms
- c. is pure
- d. is magnetized

Question 5

quenching

Clear my choice

Question 10

Answer saved

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Flag question

The recommended heat treatment process for the hacksaw is:

Select one:

- a. hHardening
- b. Normalizing
- c. annealing
- d. Normalizing+harening

Clear my choice

Previous page

Clear my choice

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Which one of the following is not equilibrium heat treatment

Select one:

- a. annealing
- b. precipitation
- c. normalizing
- d. Austenizing

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The tensile strength (TS) of steel can be predicted for the steel with a composition till eutectoid composition by the following formula:

Question 9
Not yet answered
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The cooling rate for the precipitation heat treatment process of Al-copper alloys is:

Select one:

- a. moderate
- b. slow
- c. very fast
- d. no matter

Clear my choice

Question 10
Not yet answered
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Flag question

The tensile strength (TS) of steel can be predicted for the steel with a composition till eutectoid composition by the following formula:

Select one:

- a. TS = 700*%carbon+350
- b. TS = 750*%carbon+350
- c. TS = 750*%carbon+300
- d. TS = 700*%carbon+300

Clear my choice

Question 5

Not yet answered

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Flag question

A result of the formation of a Ms-like structure

Select one:

- a. Mg and Cerium
- b. Mo and Cerium
- c. Adding Mn and Cerium
- d. Mn and Mo

Clear my choice

Next pa

◀ News forum

Jump to...

transformation ends line, then quenching

- d. Cooling to a temperature below the border line of **P** and **B, crossing the transformation starts line and soaking to a certain time, then quenching**

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The main distinct welding zones are:

Select one:

- a. Weld metal, and Knife effect in Base metal
- b. HAZ and Knife effect in Base metal
- c. Weld metal, HAZ, and Base metal
- d. Weld metal, HAZ, and Knife effect in Base metal

Clear my choice

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The hardenability is not affected by

Select one:

METALLURGICAL PROCESSES

Question 1

Not yet answered

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The main methods to correct the microstructure of castings are:

Select one:

- a. annealing
- b. hardening
- c. normalizing
- d. A and C

Question 2

Not yet answered

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Type of *sand, which is preferred by most foundries:*

Select one:

- a. synthetic
- b. mix of them

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If the nose of the TTT diagram is for an alloy at the zero time line

Select one:

- a. it is impossible to harden it
- b. Special furnace is needed to harden it
- c. It would be easy to harden it
- d. It is difficult to harden it

Question 12
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The bonding energy for ionic, metallic, secondary types can be classified respectiv follows:

Select one:

- a. variable, variable, small
- b. variable, large, small
- c. small, large, variable
- d. large, variable, small

The temperature of the formation of martensite in the CCT:

Select one:

- a. is less than that for TTT diagram
- b. is more than that for TTT diagram
- c. is shifted to the right
- d. is the same as for TTT diagram

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The fastest cooling rate is achieved when steel is quenched in

Select one:

- a. brine
- b. oil
- c. air
- d. water

Clear my choice

Ernest Samuels

أسئلة طرحها الآخرون

Why bainite does not form during continuous cooling in plain carbon steel?

How is bainite formed?

Bainite forms by the decomposition of austenite at a temperature which is above MS but below that at which fine pearlite forms. All **bainite** forms below the T0 temperature.

lecture6 ‹ www.phase-trans.msm.cam.ac.uk

Bainite in Steels - Phase Transformations

البحث عن: How is bainite formed?

What is TTT diagram for eutectoid steel?

d. brine

Clear my choice

Question 7

Not yet answered

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Flag question

The formation of the graphite into a ball form in ductile cast iron is accomplished by.

Select one:

- a. Mg and Cerium
- b. Mo and Cerium
- c. Adding Mn and Cerium

Clear my choice

Question 8

Not yet

The hardenability is not affected by

The severity of quenching media from low to high can be ranked as follows:

Select one:

- a. 5% caustic soda, 20% brine, cold water, animal oil, warm water, animal oil, mineral oil, vegetable oil,
  air, insulating material or furnace
- b. 5% caustic soda, cold water ,20% brine, warm water, animal oil, mineral oil, vegetable oil, air,
  insulating material or furnace.
- c. insulating material or furnace, air, vegetable oil, animal oil, mineral oil, cold water, warm water,
  20% brine, 5% caustic soda
- d. insulating material or furnace, air, vegetable oil, animal oil, mineral oil, warm water, cold water,
  20% brine, 5% caustic soda

Clear my choice

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The Ms temperature on the TTT diagram is a function of carbon content as foll

Select one:

- a. There is a slight change in Ms temperature
- b. The higher the %C, the higher the Ms temperature
- c. There is no change in Ms temperature
- d. The higher the %C, the higher the Ms temperature

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The cooling rate for the solution heat treatment process of Al-copper alloys is:

Select one:

- a.]moderate
- b. slow
- c. Very fast
- d. no matter

Question 19
Not yet answered
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Flag question

The formation of the graphite into a ball form in ductile cast iron is accomplished by:

Select one:

- a. Mg and Cerium
- b. Mo and Cerium
- c. Adding Mn and Cerium

Clear my choice

Question 20
Not yet answered
Marked out of 2.00
Flag question

Weldability of Plain carbon steel, medium, and High carbon steels are

Select one:

- a. Fair, good, poor respectively
- b. Good, poor, fair respectively
- c. Good, fair, fair respectively
- d. Good, fair, poor respectively

Clear my choice

Previous page

Next page

Question 16

Not yet answered

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Flag question

Bainitic microstructure in eutectoid plain carbon steel can be formed by using continuous cooling diagram if

Select one:

- a. the cooling rate goes after the critical point
- b. the cooling rate passes through the critical point
- c. the cooling rate goes before the critical point
- d. none of the choices

Question 17

Not yet answered

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Flag question

The temperature of the formation of martensite in the CCT

Select one:

- a. is the same as for TTT diagram
- b. is less than that for TTT diagram
- c. is shifted to the right
- d. is more than that for TTT diagram

Question 9

Answer saved

Marked out of 2.00

Flag question

If the nose of the TTT diagram for an alloy is at the zero time line,

Select one:

- a. Special furnace is needed to harden it
- b. It would be easy to harden it
- c. it is impossible to harden it
- d. It is difficult to harden it

Clear my choice

Question 10

Answer saved

Marked out of 2.00

Flag question

The body centered tetragonal crystal structure is:

Select one:

- a. when a=b=c and has an atom in the center and another on the surface
- b. when a=b≠c and has an atom in the center
- c. when a=b=c and has an atom on the surface
- d. when a=b=c and has an atom in the center

Clear my choice

exam metallurgy (page 1 of

lmsystem.ju.edu.jo/mod/quiz/attempt.php?attempt=376986&cmid=255651

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METALLURGICAL PROCESSES

Home | My courses | METALLURGICAL PROCESSES | Final exam Metallurgy | Final ex

Question 1
Answer saved
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A result of the formation of a Ms-like structure

Select one:

- a. Mn and Mo
- b. Mg and Cerium
- c. Adding Mn and Cerium
- d. Mo and Cerium

Clear my choice

Question 2

Type of sand which is preferred by most foundries:

Select one:

Type here to search

Question 14
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The Ms temperature on the TTT diagram is a function of carbon content as follows:

Select one:

- a. There is no change in Ms temperature
- b. There is a slight change in Ms temperature
- c. The higher the %C, the higher the Ms temperature
- d. The higher the %C, the higher the Ms temperature

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The main methods to correct the microstructure of castings are:

Select one:

Question 6

Not yet answered

Marked out of 3.00

Flag question

The bonding energy for ionic, metallic, secondary types can be classified respectively as follows:

Select one:

- a. small, large, variable
- b. variable, variable, small
- c. large, variable, small
- d. variable, large, small

Question 7

Not yet answered

Marked out of 3.00

Flag question

The crystalline structure of a-non magnetic, and a- magnetic are:

Select one:

- a. BCC, BCC repectively
- b. FCC, FCC respectively
- c. FCC, BCC repectively
- d. BCC, FCC respectively

Quiz navigation

1 2 3 4 5 6
7 8 9 10 11 12
13 14 15 16 17

Finish attempt ...

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The thickness of the shell in shell molding casting process is determined by:

Select one:

- a. the time that the pattern in contact with the mold
- b. the heating up time that is needed to raise the temperature of the pattern in contact with the mold
- c. A and B
- d. the mounted pattern should be heated to 379 °C

Question 5

Not yet
answered

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question

A result of the formation of a Ms-like structure

Select one:

- a. Mg and Cerium
- b. Mo and Cerium
- c. Adding Mn and Cerium

Question 4

Not yet answered

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Flag question

6. *The overaging mechanism in Al-Cu alloys is:*

Select one:

- a. A result of Alpha phase formation
- b. A result of the formation of a Ms-like structure
- c. A result of the perfection in the lattice
- d. A result of the distortion in the lattice

Clear my choice

Question 5

The Ms temperature on the TTT diagram is a function of carbon content as follows:

Not yet answered

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Flag question

Select one:

- a. Weld metal, and Knife effect in Base metal
- b. Weld metal, HAZ, and Knife effect in Base metal
- c. Weld metal, HAZ, and Base metal
- d. HAZ and Knife effect in Base metal

Clear my choice

Question 12

Not yet answered

Marked out of 2.00

Flag question

The recommended heat treatment process for the Drive half-shaft for a small car is:

Select one:

- a. hardening
- b. normalizing + hardening
- c. Annealing
- d. normalizing

Clear my choice

Question 13

Not yet answered

The body centered tetragonal crystal structure is

Question 5

Not yet answered

Marked out of 3.00

Flag question

Type of *sand, which is preferred by most foundries:*

Select one:

- a. none of the choices
- b. Natural
- c. synthetic
- d. mix of them

Next page

◀ News forum

Jump to...

- a. the liquid is sprayed onto the surface and into every cav uniform cooling
- b. you cool the metal in a tank of liquid
- c. none of the choices
- d. the liquid is poured onto the surface and into every cavit uniform cooling

Clear my choice

The crystalline structure of α-non magnetic, and α- magnetic α

Select one:

- a. BCC, FCC respectively
- b. FCC, BCC repectively
- c. BCC, BCC repectively
- d. FCC, FCC respectively

Clear my choice

The ascending order of strength based on microstructure is:

Select one:

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Question 16

Not yet answered

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Flag question

Bainitic microstructure in eutectoid plain carbon steel can be formed by using continuous cooling diagram if

Select one:

- a. the cooling rate goes after the critical point
- b. the cooling rate passes through the critical point
- c. the cooling rate goes before the critical point
- d. none of the choices

Clear my choice

Question 17

Not yet

The temperature of the formation of martensite in the CCT

b. Cooling to a temperature above the border line of P and B, crossing the transformation ends line and soaking to a certain time, cooling it to below the border line, soaking to a certain, then quenching

c. Cooling to a temperature below the border line of P and B, crossing the transformation starts line and soaking to a certain time, then quenching

d. Cooling to a temperature below the border line of P and B, crossing the transformation starts line and soaking to a certain time, soaking to a certain time but not cross the transformation ends line, then quenching

Clear my choice

Question 23
Not yet answered
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Flag question

The temperature of the formation of martensite in the CCT

Select one:

a. is more than that for TTT diagram

b. is less than that for TTT diagram

c. is shifted to the right

d. is the same as for TTT diagram

Clear my choice

Question 24
Not yet answered
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No post heat treatment of the weld is recommended if the carbon equivalent (CE) is:

Type here to search

d. Natural

Question 10

Not yet answered

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Flag question

The ascending order of strength based on microstructure is:

Select one:

a. Martensite, spherodite, fine pearlite

b. Spherodite, Tmartensite, martensite

c. T martensite, bainite, fine pearlite

d. fine pearlite, bainite, T martensite

Clear my choice

Previous page

◀ News forum

Jump to...

ALLURGICAL PROCESSES

Bainitic microstructure in eutectoid plain carbon steel can be formed by using continuous cooling

Select one:

- a. the cooling rate goes after the critical point
- b. none of the choices
- c. the cooling rate goes before the critical point
- d. the cooling rate passes through the critical point

Clear my choice

The cooling rate for the precipitation heat treatment process of Al-copper alloys is.

Select one:

- a. no matter
- b. slow

Select one:

- a. A result of the perfection in the lattice
- b. A result of the distortion in the lattice
- c. A result of the formation of a Ms-like structure
- d. A result of Alpha phase formation

Clear my choice

The recommended heat treatment process for the car body is:

Select one:

- a. normalizing + hardening
- b. normalizing
- c. annealing
- d. Hardening

Clear my choice

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Question 22
Not yet answered
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Flag question

A method of getting a mixture of Pearlite (P), Bainite (B) & Martensite (M) in an eutectoid steel is:

Select one:

- a. Cooling to a temperature above the border line of P and B, crossing the transformation starts line and soaking to a certain time, cooling it to below the border line, soaking to a certain time but not to cross the transformation ends line, then quenching
- b. Cooling to a temperature above the border line of P and B, crossing the transformation ends line and soaking to a certain time, cooling it to below the border line, soaking to a certain, then quenching
- c. Cooling to a temperature below the border line of P and B, crossing the transformation starts line and soaking to a certain time, then quenching
- d. Cooling to a temperature below the border line of P and B, crossing the transformation starts line and soaking to a certain time, soaking to a certain time but not cross the transformation ends line, then quenching

Clear my choice

Question 23
Not yet answered
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Flag question

The temperature of the formation of martensite in the CCT:

Select one:

- a. is more than that for TTT diagram
- b. is less than that for TTT diagram

Type here to search

Answer saved

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Flag question

The body centered tetragonal crystal structure is:

Time left **0:09:03**

Select one:

- a. when a=b=c and has an atom in the center
- b. when a=b=c and has an atom in the center and another on the surface
- c. when a=b=c and has an atom on the surface
- d. when a=b≠c and has an atom in the center

Clear my choice

Question **3**

Answer saved

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Flag question

The hardenability is not affected by

Select one:

- a. quenching medium and method of
- b. air
- c. critical cooling rate
- d. chemical composition of steel

Clear my choice

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The main methods to correct the microstructure of castings are:

Select one:

- a. annealing
- b. hardening
- c. normalizing
- d. A and C

of the formation of martensite in the CCT.

Clear my choice

Which one of the following is not equilibrium heat treatment

Select one:

- a. Austenizing
- b. annealing
- c. precipitation
- d. normalizing

Clear my choice

The slowest cooling rate is obtained when steel is quenched in

Select one:

- a. mixture of oil and water
- b. fused salt
- c. air
- d. brine

Clear my choice

- c. BCC, BCC repectively
- d. FCC, FCC respectively

Clear my choice

The ascending order of strength based on microstructure is:

Select one:

- a. Spherodite, Tmartensite, martensite
- b. fine pearlite, bainite, T martensite
- c. Martensite, spherodite, fine pearlite
- d. T martensite, bainite, fine pearlite

Clear my choice

Type of *sand, which is preferred by most foundries:*

Select one:

- a. synthetic
- b. none of the choices
- c. mix of them
- d. Natural

Clear my choice

d. Cooling to a temperature below the border line of P and B, crossing the transformation starts line and soaking to a certain time, soaking to a certain time but not cross the transformation ends line, then quenching

Clear my choice

Question 15

Answer saved

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Flag question

No post heat treatment of the weld is recommended if the carbon equivalent (CE) is:

Select one:

- a. $CE < 0.35$
- b. $0.35 < CE < 0.55$
- c. $0.55 < CE$
- d. A and B

Clear my choice

Next

Question 11

Not yet answered

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Flag question

Spherodite microstructure in eutectoid plain carbon steel can be formed by using isothermal transformation process if

Select one:

- a. cooled to lower the critical temperature only and left for 10^4 seconds
- b. cooled to above the critical temperature or lower to it and left for 10^4 seconds
- c. cooled to above the critical temperature only and left for 10^4 seconds
- d. cooled to the critical temperature only and left for 10^4 seconds

Question 12

Answer saved

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The cooling rate for the solution heat treatment process of Al-copper alloys is.

Question 6
Not yet answered
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The slowest cooling rate is obtained when steel is quenched in

Select one:

- a. air
- b. fused salt
- c. brine
- d. mixture of oil and water

Clear my choice

Question 7
Not yet answered
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Flag question

Annealing temperature is:

Select one:

- a. same as normalizing temperature
- b. greater than normalizing temperature
- c. less than normalizing temperature
- d. sometimes greater and sometimes lesser than normalizing temperature

Clear my choice

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The ascending order of strength based on microstructure is:

Select one:

- a. fine pearlite, bainite, T martensite
- b. Martensite, spherodite, fine pearlite
- c. Spherodite, Tmartensite, martensite
- d. T martensite, bainite, fine pearlite

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Bainitic microstructure in eutectoid plain carbon steel can be formed by using continuous cooling diagram if

Select one:

- a. the cooling rate passes through the critical point
- b. none of the choices
- c. the cooling rate goes before the critical point
- d. the cooling rate goes after the critical point

of the TTT diagram is for an alloy at the zero time line

Quiz navigation

1	2	3	4	5
7	8	9	10	11
13	14	15	16	17

Finish attempt ...

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Type of *sand, which is preferred by most foundries:*

Select one:

- a. synthetic
- b. mix of them
- c. none of the choices
- d. Natural

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The ascending order of strength based on microstructure is:

Select one:

- a. fine pearlite, bainite, T martensite
- b. Spherodite, Tmartensite, martensite
- c. Martensite, spherodite, fine pearlite
- d. T martensite, bainite, fine pearlite

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Flush quenching is when:

Clear my choice

The cooling rate for the precipitation heat treatment process of Al-copper alloys is:

Select one:

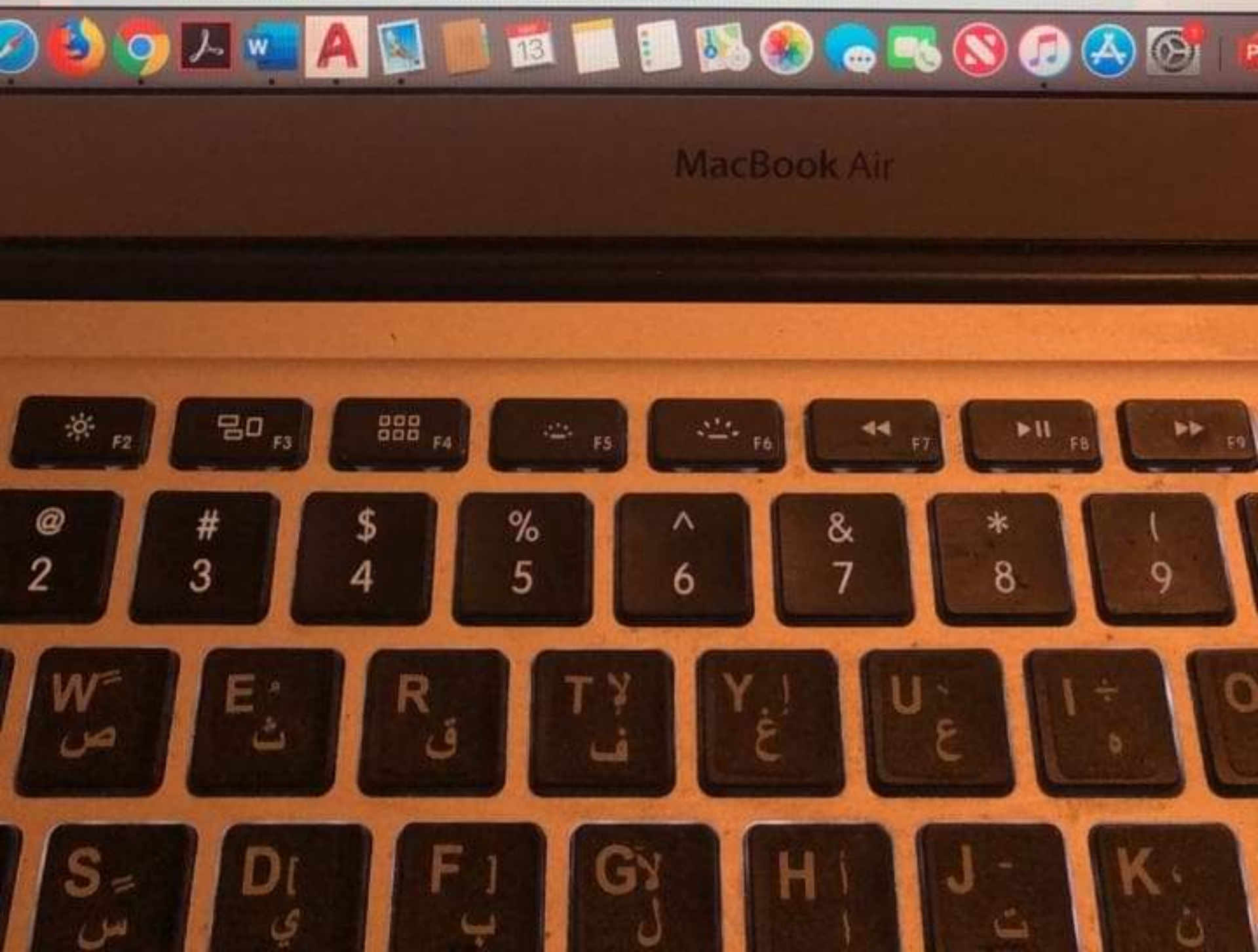
- a. moderate
- b. very fast
- c. slow
- d. no matter

Spherodite microstructure in eutectoid plain carbon steel can be formed by using isothermal transformation process if

Select one:

- a. cooled to lower the critical temperature only and left for 10^4 seconds
- b. cooled to the critical temperature only and left for 10^4 seconds
- c. cooled to above the critical temperature only and left for 10^4 seconds
- d. cooled to above the critical temperature or lower to it and left for 10^4 seconds

Flush quenching is when:



Clear my choice

Question 2

Not yet answered

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Flag question

Bainitic microstructure in eutectoid plain carbon steel can be formed by using continuous cooling diagram if

Select one:

- a. the cooling rate passes through the critical point
- b. none of the choices
- c. the cooling rate goes before the critical point
- d. the cooling rate goes after the critical point

Clear my choice

Question 3

Not yet answered

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If the nose of the TTT diagram is for an alloy at the zero time line

Select one:

a. Special furnace is needed to harden it

Clear my choice

The temperature of the formation of martensite in the CCT:

Select one:

- a. is more than that for TTT diagram
- b. is the same as for TTT diagram
- c. is shifted to the right
- d. is less than that for TTT diagram

Clear my choice

The cooling rate for the solution heat treatment process of Al-copper

Select one:

- a. slow
- b. Very fast
- c.]moderate
- d. no matter

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The recommended heat treatment process for the car body is:

Select one:

- a. normalizing + hardening
- b. normalizing
- c. annealing
- d. Hardening

Clear my choice

14

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The main distinct welding zones are:

Select one:

- a. Weld metal, and Knife effect in Base metal
- b. HAZ and Knife effect in Base metal
- c. Weld metal, HAZ, and Base metal
- d. Weld metal, HAZ, and Knife effect in Base metal

Clear my choice

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The hardenability is not affected by

Select one:

- a. quenching medium and method of
- b. air
- c. critical cooling rate
- d. chemical composition of steel

Clear my choice

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METALLURGICAL PROCESSES

Home My courses METALLURGICAL PROCESSES 16 August - 22 Aug

Question 6
Answer saved
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Flag question

The recommended heat treatment process for the hacksaw is:

Select one:
- a. annealing
- b. Normalizing+harening
- c. hHardening
- d. Normalizing

Clear my choice

Dendrite can be seen clearly in the microstructure of the castings if the alloy:

ct one:
s pure
s impurity atoms

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Answered

Marked out of 2.00

Flag question

Select one:

- a. hardening
- b. normalizing + hardening
- c. Annealing
- d. normalizing

Clear my choice

Question 13

Not yet answered

Marked out of 2.00

Flag question

The body centered tetragonal crystal structure is:

Select one:

- a. when a=b≠c and has an atom in the center
- b. when a=b=c and has an atom in the center and another on the surface
- c. when a=b=c and has an atom in the center
- d. when a=b=c and has an atom on the surface

Clear my choice

Question 14

Not yet answered

Marked out of

Which one of the following is not correct

Type here to search

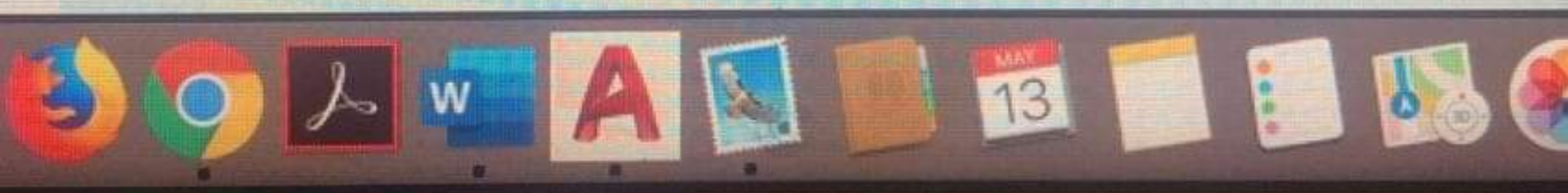
Type of *sand, which is preferred by most foundries:*

Select one:

- a. none of the choices
- b. mix of them
- c. synthetic
- d. Natural

Clear my choice

The cooling rate for the solution heat treatment proces



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The severity of quenching media from low to high can be ranked as follows:

Select one:

- a. insulating material or furnace, air, vegetable oil, animal oil, mineral oil, warm water, cold water,
  20% brine, 5% caustic soda
- b. 5% caustic soda, 20% brine, cold water, animal oil, warm water, animal oil, mineral oil, vegetable oil,
  air, insulating material or furnace
- c. insulating material or furnace, air, vegetable oil, animal oil, mineral oil, cold water, warm water,
  20% brine, 5% caustic soda
- d. 5% caustic soda, cold water ,20% brine, warm water, animal oil, mineral oil, vegetable oil, air,
  insulating material or furnace.

The hardenability is not affected by

Select one:

- a. quenching medium and method of
- b. air
- c. critical cooling rate
- d. chemical composition of steel

The temperature of the formation of martensite in the CCT:

Select one:

- a. is the same as for TTT diagram
- b. is shifted to the right
- c. is less than that for TTT diagram
- d. is more than that for TTT diagram

Clear my choice

Question 20

Answer saved

Marked out of 2.00

Flag question

Which one of the following is not correct

Select one:

- a. Martensite has a BCC structure
- b. Austenite has FCC structure
- c. The martensite which is formed during quenching is too brittle
- d. Martensite is a solid solution of carbon in BCC iron

Clear my choice

Previous page

LLURGICAL PROCESSES

Bainite is:

Select one:

- a. It is a solid solution of iron and carbon
- b. It is the mixture of ferrite and cementite
- c. It is Ferrite and Cementite! It's just acicular
- d. It is very hard and brittle

Clear my choice

Which one of the following is not correct

Select one:

- a. Martensite has a BCC structure
- b. The martensite which is formed during quenching is too b

d
of
earch

Clear my choice

Annealing temperature is:

Select one:

- a. greater than normalizing temperature
- b. same as normalizing temperature
- c. sometimes greater and sometimes lesser than
- d. less than normalizing temperature

Clear my choice

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Which one of the following is not equilibrium heat trea

Select one:

- a. Austenizing
- b. annealing
- c. precipitation
- d. normalizing

Clear my choice

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b. Normalizing+harening

c. hHardening

d. Normalizing

Clear my choice

Question 7

Answer saved

Marked out of 2.00

Flag question

Dendrite can be seen clearly in the microstructure of the castings if the alloy:

Select one:

a. is pure

b. has impurity atoms

c. is magnetized

d. is radio active

Clear my choice

Question 8

Not yet answered

Marked out of

1. *The limitation of the phase diagram for heat treatment purposes is that*

Select one:

Question 4

Not yet answered

Marked out of 3.00

Flag question

Flush quenching is when:

Select one:

- a. the liquid is poured onto the surface and into every cavity of the to ensure uniform cooling
- b. the liquid is sprayed onto the surface and into every cavity of the to ensure uniform cooling
- c. none of the choices
- d. you cool the metal in a tank of liquid

Question 5

Not yet answered

Marked out of 3.00

Flag question

6. The overaging mechanism in Al-Cu alloys is:

Select one:

- a. A result of Alpha phase formation
- b. A result of the perfection in the lattice
- c. A result of the formation of a Ms-like structure

d. is the same as for TTT diagram

The bonding energy for ionic, metallic, secondary types can be classified respectively as follows:

Select one:

- a. large, variable, small
- b. variable, variable, small
- c. small, large, variable
- d. variable, large, small

Clear my choice

Clear my choice

Question 17

Not yet answered

Marked out of 2.00

Flag question

The fastest cooling rate is achieved when steel is quenched in

Select one:

- a. brine
- b. air
- c. oil
- d. water

Clear my choice

Question 18

Not yet answered

Marked out of 2.00

Flag

The recommended heat treatment process for the car body is:

Select one:

- a. normalizing + hardening

Question 8

Not yet answered

Marked out of 3.00

Flag question

The severity of quenching media from low to high can be ranked as follows:

Select one:

- a. insulating material or furnace, air, vegetable oil, animal oil, mineral oil, warm water, cold water,
  20% brine, 5% caustic soda
- b. 5% caustic soda, 20% brine, cold water, animal oil, warm water, animal oil, mineral oil, vegetable oil,
  air, insulating material or furnace
- c. insulating material or furnace, air, vegetable oil, animal oil, mineral oil, cold water, warm water,
  20% brine, 5% caustic soda
- d. 5% caustic soda, cold water ,20% brine, warm water, animal oil, mineral oil, vegetable oil, air,
  insulating material or furnace.

Question 9

Not yet answered

Marked out of 3.00

Flush quenching is when:

Select one:

- a. the liquid is sprayed onto the surface and into every cavity of the part at the same time to ensure

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Question 10

Not yet answered

Marked out of 3.00

Flag question

The severity of quenching media from low to high can be ranked as follows:

Select one:

a. insulating material or furnace, air, vegetable oil, animal oil, mineral oil, warm water, cold water,
20% brine, 5% caustic soda

b. insulating material or furnace, air, vegetable oil, animal oil, mineral oil, cold water, warm water,
20% brine, 5% caustic soda

c. 5% caustic soda, 20% brine, cold water, animal oil, warm water, animal oil, mineral oil, vegetable oil,
air, insulating material or furnace

d. 5% caustic soda, cold water ,20% brine, warm water, animal oil, mineral oil, vegetable oil, air,
insulating material or furnace.

Previous page

Next page

Question 9

Not yet answered

Marked out of 3.00

Flag question

Flush quenching is when:

Select one:

- a. the liquid is sprayed onto the surface and into every cavity of the part at the same time to ensure uniform cooling
- b. none of the choices
- c. the liquid is poured onto the surface and into every cavity of the part at the same time to ensure uniform cooling
- d. you cool the metal in a tank of liquid

Question 10

Not yet answered

Marked out of 3.00

Flag question

The thickness of the shell in shell molding casting process is determined by:

Select one:

- a. the time that the pattern in contact with the mold
- b. the heating up time that is needed to raise the temperature of the pattern in contact with the mold
- c. A and B
- d. the mounted pattern should be heated to 379 °C

Question 4

Not yet answered

Marked out of 3.00

Flag question

The temperature of the formation of martensite in the CCT:

Select one:

- a. is more than that for TTT diagram
- b. is shifted to the right
- c. is less than that for TTT diagram
- d. is the same as for TTT diagram

Question 5

Answer saved

Type of *sand, which is preferred by most foundries:*

Clear my choice

Question 5

Not yet answered

Marked out of 2.00

Flag question

The slowest cooling rate is obtained when steel is quenched in

Select one:

- a. air
- b. fused salt
- c. brine
- d. mixture of oil and water

Clear my choice

Type here to search

Question 4

Not yet answered

Marked out of 2.00

Flag question

The tensile strength (TS) of steel can be predicted for the steel with a composition till eutectoid composition by the following formula:

Select one:

- a. TS = 700×%carbon+350
- b. TS = 750×%carbon+350
- c. TS = 750×%carbon+300
- d. TS = 700×%carbon+300

Clear my choice

Clear my choice

Question 7

Answer saved

Marked out of 2.00

Flag question

The recommended heat treatment process for the car body is:

Select one:

- a. annealing
- b. normalizing
- c. Hardening
- d. normalizing + hardening

Clear my choice

Question 8

Austenite is:

METALLURGICAL PROCESSES

Question 11
Not yet answered
Marked out of 2.00
Flag question

The overaging mechanism in Al-Cu alloys is:

Select one:

- a. A result of the perfection in the lattice
- b. A result of the distortion in the lattice
- c. A result of Alpha phase formation
- d. A result of the formation of a Ms-like structure

Clear my choice

Question 12
Answer saved
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Flag question

The tensile strength (TS) of steel can be predicted for the steel with a composition till eutectoid composition by the following formula:

Select one:

- a. TS = 750x%carbon+350

Quiz navigati

1 2 3
9 10 11
17 18 19
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Finish attempt ...

Time left 0:34:42

Question 13

Not yet answered

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Flag question

The formation of the graphite into a ball form in ductile cast iron is accomplished by.

Select one:

- (●) a. Mg and Cerium
- ( ) b. Adding Mn and Cerium
- ( ) c. Mo and Cerium

Clear my choice

Question 14

Not yet answered

Marked out of 2.00

Flag question

The overaging mechanism in Al-Cu alloys is.

Select one:

- ( ) a. A result of the perfection in the lattice
- (●) b. A result of the distortion in the lattice
- ( ) c. A result of the formation of a Ms-like structure
- ( ) d. A result of Alpha phase formation

Clear my choice

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Dendrite can be seen clearly in the microstructure of the castings if the alloy:

Select one:

- a. is radio active
- b. has impurity atoms
- c. is pure
- d. is magnetized

Clear my choice

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The recommended heat treatment process for the car body is:

c. oil

d. water

Clear my choice

Question 18

Not yet answered

Marked out of 2.00

Flag question

The recommended heat treatment process for the car body is:

Select one:

a. normalizing + hardening

b. annealing

c. normalizing

d. Hardening

Question 19

Not yet answered

Marked out of 2.00

No post heat treatment of the weld is recommended if the carbon equivalent (CE) is

Select one:

d. it is impossible to harden it

Question 15

Not yet answered

Marked out of 2.00

Flag question

No post heat treatment of the weld is recommended if the carbon equivalent (CE) is:

Select one:

a. $CE < 0.35$

b. $0.35 < CE < 0.55$

c. $0.55 < CE$

d. A and B

Clear my choice

Previous page

Next p

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Clear my choice

Question 4

Not yet answered

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Flag question

The temperature of the formation of martensite in the CCT:

Select one:

- a. is more than that for TTT diagram
- b. is shifted to the right
- c. is less than that for TTT diagram
- d. is the same as for TTT diagram

Question 5

Answer saved

Marked out of

Type of *sand, which is preferred by most foundries:*

Select one:

d. none of the choices

Clear my choice

Spherodite microstructure in eutectoid plain carbon steel can be formed by using isothermal transformation process if

Select one:

a. cooled to above the critical temperature or lower to it and left for 10^4 seconds

b. cooled to lower the critical temperature only and left for 10^4 seconds

c. cooled to the critical temperature only and left for 10^4 seconds

d. cooled to above the critical temperature only and left for 10^4 seconds

Type of sand which is preferred by most foundries:

The recommended heat treatment process for the Drive half-shaft for a small car is:

Select one:

- a. normalizing
- b. normalizing + hardening
- c. Annealing
- d. hardening

Clear my choice

The Ms temperature on the TTT diagram is a function of carbon content as follows:

Question 3

Not yet answered

Marked out of 3.00

Flag question

If the nose of the TTT diagram is for an alloy at the zero time line

Select one:

- a. Special furnace is needed to harden it
- b. It would be easy to harden it
- c. It is difficult to harden it
- d. it is impossible to harden it

Question 4

Not yet answered

Marked out of 3.00

Flag question

The temperature of the formation of martensite in the CCT:

Select one:

- a. is more than that for TTT diagram
- b. is shifted to the right
- c. is less than that for TTT diagram
- d. is the same as for TTT diagram

Which one of the following is not equilibrium heat treatment

Select one:

- a. annealing
- b. precipitation
- c. Austenizing
- d. normalizing

Clear my choice

Not yet answered

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Flag question

1. *The limitation of the phase diagram for heat treatment purposes is that*

Select one:

- a. it is used only for plain carbon steel
- b. it does not show the bainite
- c. it does not show the effect of cooling rate
- d. Austenite does not exist at room temperature

Question 22

Not yet answered

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Flag question

The cooling rate for the precipitation heat treatment process of Al-copper alloys is:

Select one:

- a. very fast
- b. slow
- c. no matter
- d. moderate

Quiz navigation

1 2 3 4
7 8 9 10
13 14 15 16
19 20 21 22
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Finish attempt ...

Time left 0:15:06

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Clear my choice

If the nose of the TTT diagram is for an alloy at the zero time line

Select one:

- a. Special furnace is needed to harden it
- b. it is impossible to harden it
- c. It would be easy to harden it
- d. It is difficult to harden it

Clear my choice

The thickness of the shell in shell molding casting process is determined by:

Select one:

- a. the time that the pattern in contact with the mold
- b. the heating up time that is needed to raise the temperature of the pattern in contact with the mold
- c. A and B
- d. the mounted pattern should be heated to 379 °C

Clear my choice

○ d. moderate

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Which one of the following is not correct

Select one:

◉ a. Martensite has a BCC structure

○ b. Austenite has FCC structure

○ c. The martensite which is formed during quenching is too brittle

○ d. Martensite is a solid solution of carbon in BCC iron

Clear my choice

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Austenite is:

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Question 17
Not yet answered
Marked out of 2.00
Flag question

The recommended heat treatment process for the hacksaw is:

Select one:

- a. hHardening
- b. annealing
- c. Normalizing
- d. Normalizing+harening

Clear my choice

Question 18
Not yet answered
Marked out of 2.00
Flag question

If the nose of the TTT diagram for an alloy is at the zero time line

Select one:

- a. it is difficult to harden it
- b. Special furnace is needed to harden it
- c. It is impossible to harden it
- d. It would be easy to harden it

Clear my choice

Time le

Type here to search

Clear my choice

The recommended heat treatment process for the hacksaw is:

Select one:

- a. annealing
- b. Normalizing
- c. Normalizing+harening
- d. hHardening

Clear my choice

Clear my choice

Question 13

Not yet answered

Marked out of 3.00

Flag question

The Ms temperature on the TTT diagram is a function of carbon content as follows:

Select one:

- a. There is a slight change in Ms temperature
- b. The higher the %C, the higher the Ms temperature
- c. There is no change in Ms temperature
- d. The higher the %C, the higher the Ms temperature

Question 14

Answer saved

Marked out of 3.00

Flag

The cooling rate for the solution heat treatment process of Al-copper alloys is:

Select one:

Flush quenching is when:

Select one:

- a. the liquid is sprayed onto the surface and into every cavity of the pa uniform cooling
- b. you cool the metal in a tank of liquid
- c. none of the choices
- d. the liquid is poured onto the surface and into every cavity of the part uniform cooling

Clear my choice

The crystalline structure of α-non magnetic, and α- magnetic are:

Select one:

- a. BCC, FCC respectively
- b. FCC, BCC repectively
- c. BCC, BCC repectively
- d. FCC, FCC respectively

Clear my choice

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The Ms temperature on the TTT diagram is a function of carbon content as follows:

Select one:

- a. There is no change in Ms temperature
- b. There is a slight change in Ms temperature
- c. The higher the %C, the higher the Ms temperature
- d. The higher the %C, the lower the Ms temperature

Clear my choice

on 12

The overaging mechanism in Al-Cu alloys is:

Question 2

Not yet answered

Marked out of 2.00

Flag question

Bainitic microstructure in eutectoid plain carbon steel can be formed by using continuous cooling diagram If

Select one:

- a. the cooling rate goes after the critical point
- b. the cooling rate passes through the critical point
- c. the cooling rate goes before the critical point
- d. none of the choices

Question 3

Not yet answered

Marked out of 2.00

Flag question

Spherodite microstructure in eutectoid plain carbon steel can be formed by using isothermal transformation process if

Select one:

- a. cooled to above the critical temperature or lower to it and left for 10^4 seconds
- b. cooled to lower the critical temperature only and left for 10^4 seconds
- c. cooled to the critical temperature only and left for 10^4 seconds
- d. cooled to above the critical temperature only and left for 10^4 seconds