

Telangana State Council Higher Education

Notations :

1.Options shown in green color and with icon are correct.

2.Options shown in red color and with icon are incorrect.

Question Paper Name :	Metallurgical Engineering
Subject Name :	2022-08-0416:46:5
Creation Date :	120
Duration :	120
Total Marks :	Yes
Display Marks:	None
Calculator :	No
Magnifying Glass Required? :	No
Ruler Required? :	No
Eraser Required? :	No
Scratch Pad Required? :	No
Rough Sketch/Notepad Required? :	No
Protractor Required? :	No
Show Watermark on Console? :	No
Highlighter :	Yes
Auto Save on Console?	No
Change Font Color :	Yes
Change Background Color :	No
Change Theme :	No
Help Button :	No
Show Reports :	No
Metallurgical Engineering 4th Aug 2022	No
Shift 2	No
Show Progress Bar :	No

Metallurgical Engineering

Group Number :

Group Id :

34058055

Group Maximum Duration :

Group Minimum Duration :	120
Show Attended Group? :	No
Edit Attended Group? :	No
Break time :	
Group Marks :	120
Is this Group for Examiner? :	No
Examiner permission :	Cant View
Show Progress Bar? :	No

Mathematics

Section Id :	340580101
Section Number :	1
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	10
Number of Questions to be attempted :	10
Section Marks :	10
Enable Mark as Answered Mark for Review and	Yes
Clear Response :	
Maximum Instruction Time :	
Sub-Section Number :	1
Sub-Section Id :	340580101
Question Shuffling Allowed :	Yes

Question Number : 1 Question Id : 3405806481 Question Type : MCQ Option Shuffling :
Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time
: N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0

The sum of eigen values of $\begin{bmatrix} 4 & -3 & 2 \\ -3 & 2 & 4 \end{bmatrix}$ is

Options :

3

34058025921.

4

34058025922.

34058025923.

8 6

34058025924.

Question Number : 2 Question Id : 3405806482 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The rank of the $\begin{bmatrix} 1 & 1 & 1 \\ 1 & -1 & 1 \\ 1 & 0 & 2 \\ 3 & 1 & 1 \end{bmatrix}$ matrix is

3 2

Options :

1

34058025925. 8

2

34058025926. 8

3

34058025927.

34058025928.

Question Number : 3 Question Id : 3405806483 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

If $\mathbf{F} = xy\mathbf{i} + (y^2 + 1)\mathbf{j}$, $P = (0, 0, 0)$, $Q = (1, 1, 0)$ and if C is the line segment from

P to Q then $\int_C \mathbf{F} \cdot d\mathbf{r} = c$

Options :

5

6

34058025929. 8

5

34058025930. 2

5

34058025931. 3

3

34058025932. 2

Question Number : 4 Question Id : 3405806484 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : O

Correct Marks : 1 Wrong Marks : O

2

If \vec{r} is the position vector of a point in three dimensional space, then $\nabla(\log|\vec{r}|) =$

Options :

1

34058025933. 8

1

$-\frac{2}{r}$

34058025934.

1

$-\frac{3}{r}$

34058025935.

1

$\frac{1}{r^2}$

34058025936.

Question Number : 5 Question Id : 3405806485 Question Type : MCQ Option Shuffling :

Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : O

Correct Marks : 1 Wrong Marks : O

$$\lim_{x \rightarrow 0} \frac{a^x - b^x}{c^x - d^x} =$$

Options :

$\frac{\log(a/b)}{\log(c/d)}$

$\log(c/d)$

34058025937.

$\frac{\log(c/d)}{\log(a/b)}$

34058025938. ✖ $\log(a/b)$

$\log(a/c)$

$\log(b/d)$

34058025939.

$\log(b/d)$

34058025940. ✖ $\log(a/c)$

Question Number : 6 Question Id : 3405806486 Question Type : MCQ Option Shuffling :
Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response
Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

$1n(n+1)(n+$

2)

Options :

1

234058025941.

1

34058025942. 8 3

1

4

34058025943.

1

34058025944. 6

Question Number : 7 Question Id : 3405806487 Question Type : MCQ Option Shuffling :
 Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None
 Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
 Correct Marks : 1 Wrong Marks : 0

The series $\sum_{n=1}^{\infty} \frac{1}{n}$ is

Options :

34058025945. Convergent

Divergent

34058025946.

34058025947. Converges to e^2

34058025948. Converges to e

Question Number : 8 Question Id : 3405806488 Question Type : MCQ Option Shuffling :
 Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response
 Time : N.A Think Time : N.A Minimum Instruction Time : 0
 Correct Marks : 1 Wrong Marks : 0

$Z = \tan^{-1}\left(\frac{y}{x}\right) \Rightarrow \frac{\partial^2 Z}{\partial x^2} + \frac{\partial^2 Z}{\partial y^2}$

Options :

34058025949.

1

34058025950.

8 z

34058025951.

2z

34058025952.

Question Number : 9 Question Id : 3405806489 Question Type : MCQ Option Shuffling :

Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None

Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The general solution of $xy' - xy' + y = 0$ is

Options : a

$$= \frac{a}{x} + bx \log x$$

34058025953.

$$= \frac{a}{x^2} + bx \log x$$

34058025954. 8

$$= \frac{a}{x^3} + bx \log x$$

34058025955. 8

$$Y(x) = ax + bx \log x$$

34058025956.

Question Number : 10 Question Id : 3405806490 Question Type : MCQ Option Shuffling

: Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None

Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

If $P(A) = \frac{1}{5}$, $P(B) = \frac{1}{5}$ and $P(A \cup B) = \frac{2}{5}$, then $P(A \cap B) + P(B \cap A) =$

Options :

9

11 34058025957.

18

20

34058025958. 8

1

34058025959. s:

21

20

34058025960.

Metallurgical Engineering

Section Id : 340580102

Section Number : 2

Section type : Online

Mandatory or Optional : Mandatory

Number of Questions : 110

Number of Questions to be attempted : 110

Section Marks : 110

Enable Mark as Answered Mark for Review and
Yes

Clear Response :

Maximum Instruction Time :

Sub-Section Number :

Sub-Section Id : 340580102

Question Shuffling Allowed : Yes

Question Number : 11 Question Id : 3405806491 Question Type : MCQ Option Shuffling
: Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None

Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Heating of an ore below its melting point in the absence of air is known as—

Options :
34058025961.
Leaching

34058025962. ✖ Roasting

Calcination
34058025963.

34058025964. 8 Smelting

Question Number : 12 Question Id : 3405806492 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The hottest region of a blast furnace is _____

Options :
Throat
34058025965.

Stack
34058025966.

Bosh
34058025967.

Health
34058025968.

Question Number : 13 Question Id : 3405806493 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Dephosphorization of hot metal in steelmaking is favored by _____

Options :

Oxidizing and basic slag

34058025969.

Reducing and basic slag

34058025970.

Oxidizing and neutral slag

34058025971. 8

✘ Oxidizing and acidic slag

34058025972.

Question Number : 14 Question Id : 3405806494 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Most of the phosphorus present in the blast furnace charge goes into _____

Options :

34058025973. ✘

Pig iron

34058025974.

34058025975. 8

Slag

Flue gas

Refract01Y lining

34058025976.

Question Number : 15 Question Id : 3405806495 Question Type : MCQ Option Shuffling

: Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None

Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The conditions favorable for producing low-silicon pig iron are_____

Options :

Lower temperature and higher slag basicity

34058025977.

Lower temperature and lower slag basicity

34058025978. ✖

34058025979. 8

Higher temperature and higher slag basicity

Higher temperature and lower slag basicity

34058025980.

Question Number : 16 Question Id : 3405806496 Question Type : MCQ Option Shuffling

: Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response

Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The primary source of sulfur in blast furnace charge is_____

Options :

34058025981. 8 Iron ore

Sinter

34058025982. 8

Flux

34058025983.

34058025984. Coke

Question Number : 17 Question Id : 3405806497 Question Type : MCQ Option Shuffling

: Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None

Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Tile mold for continuous casting of steel is made of water-cooled _____

Options :

Alumina

34058025985. s:

Silicon carbide

34058025986.

Copper

34058025987.

✘ Tungsten

34058025988.

Question Number : 18 Question Id : 3405806498 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Zinc is commercially extracted from _____

Options :

34058025989. Sphalerite

34058025990. Ilmenite

34058025991. Bauxite

34058025992. Chalcopyrite

Question Number : 19 Question Id : 3405806499 Question Type : MCQ Option Shuffling

: Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None

Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Titanium is produced by reacting _____

Options :

34058025993. Titanium tetrachloride with carbon

34058025994. Titanium tetrachloride with magnesium

Titanium dioxide with sodium

34058025995.

Titanium dioxide with carbon

34058025996.

Question Number : 20 Question Id : 3405806500 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

_____is produced by carbonyl process

Options :

Aluminum

34058025997. 8

34058025998. s, Magnesium

Zirconium

34058025999. 8

Nickel

34058026000.

Question Number : 21 Question Id : 3405806501 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Seawater is a virtually unlimited source of _____

Options :

34058026001M Mg

Sn

34058026002. 8

34058026003.

34058026004. 8

Question Number : 22 Question Id : 3405806502 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Sievelts' law states that

Options :

The solubility of a diatomic gas in a metal is Inversely propofional to the square root of the pafial pressure of the gas in themodynamic equilblium 34058026005.

The solubility of a diatomic gas in a metal is inversely proponional to the paltial pressure ofthe gas in thennodynamic equilibrium 34058026006.

The solubility of a diatomic gas in a metal is directly proportional to the square root of the pattial pressure of the gas in thennodynamic equilibrium

34058026007.

The solubility of a diatomic gas in a metal is directly proponional to the partial pressure of the gas in thennodynamic equilibrium

34058026008. 8

Question Number : 23 Question Id : 3405806503 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

A body is said to be in thermodynamic equilibrium if it in

Options :

34058026009. Thermal, chemical, and mechanical equilibrium

34058026010. Thermal and mechanical equilibrium

34058026011. Thermal and chemical equilibrium

34058026012. 8 equilibrium
Question Number : 24 Question Id : 3405806504 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes

Chemical and mechanical equilibrium
Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 1 Wrong Marks : 0

Relative efficiency or efficiency ratio is the ratio of

Options :

34058026013. Actual thermal efficiency to air — standard efficiency

34058026014. Air — standard efficiency to actual thermal efficiency

34058026015. s: Break power to indicated power

34058026016. Indicated power to break power

Question Number : 25 Question Id : 3405806505 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 1 Wrong Marks : 0

Which of the following is not an intensive property

Options :

34058026017. ✖ Viscosity

Temperature

34058026018.

Helmholtz energy

34058026019.

Chemical potential

34058026020. 8

Question Number : 26 Question Id : 3405806506 Question Type : MCQ Option Shuffling

: Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None

Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Configurational entropy of a binary solution A-B approaches the following value as
concentration of B approaches 1

Options :

34058026021.

34058026022. 8

1

34058026023. 8

0.5R

34058026024.

Question Number : 27 Question Id : 3405806507 Question Type : MCQ Option Shuffling

: Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None

Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

'a' amount of benzene and 'b' amount of toluene are mixed to form a solution.

The volume of the resulting solution 'V' will be _____

Options :

$$V > a + b$$

34058026025. 8

$$V = a + b$$

34058026026.

34058026027.

$$V = a - b$$

$$V < a + b$$

8

34058026028.

Question Number : 28 Question Id : 3405806508 Question Type : MCQ Option Shuffling

: Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None

Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The heat loss per hour through 1 Square meter of a furnace wall 50cm thick is

1000 W. What will be outside temperature of the wall, if inside surface

temperature is 1000°C and an average thermal conductivity is 0.5 W/m.K

Options :

$$5000^\circ\text{C}$$

34058026029. 8

2500°C

34058026030.

0°C

34058026031.

10000c

34058026032.

Question Number : 29 Question Id : 3405806509 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

is an equilibrium defect

Options :

Vacancy

34058026033.

Dislocation

34058026034.

Stacking fault

34058026035.

Grain boundary

34058026036. 8

Question Number : 30 Question Id : 3405806510 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

For the same final volume, the work done in an adiabatic process is _____

Options :

34058026037. 8 Two times higher than work done in an isothermal process

Three times higher than the work done in an isothermal process

34058026038.

Lower than the work done in an isothennal process

34058026039.

34058026040. s: The same as the work done in an isothennal process
tle

Question Number : 31 Question Id : 3405806511 Question Type : MCQ Option Shuffling
: Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response
Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The relation between Gibbs' free energy 'G' and Helmholtz free energy 'A'
is _____

Options :

34058026041. $A = PV - G$

34058026042. ✘ $A = PV + G$

34058026043. ✔ $A = G - PV$

34058026044. $A = -PV - G$

Question Number : 32 Question Id : 3405806512 Question Type : MCQ Option Shuffling
: Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time

: N.A Think Time : N.A Minimum Instruction Time : O

Correct Marks : 1 Wrong Marks : O

The viscosity of _____ decreases with Increase in strain rate

Options :

34058026045. Dilatant fluids

Pseudoplastic fluids

34058026046.

Bingham plastics

34058026047. 8

Newtonian fluids

34058026048. 8

Question Number : 33 Question Id : 3405806513 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : O

Correct Marks : 1 Wrong Marks : O

A material with a Biot number (Bi) of less than 0.1 is known as a _____

material

Options :

34058026049. Thennally active

Thennally passive

34058026050. 8

34058026051. 8 Thennally thick

34058026052.

Thennally thin

Question Number : 34 Question Id : 3405806514 Question Type : MCQ Option Shuffling
: Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response
Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The ratio of convective mass transfer and diffusive mass transfer is given by

Options :

Fourier Number

34058026053.

Rayleigh Number

34058026054.

Nusselt Number

34058026055.

Sherwood Number

34058026056.

Question Number : 35 Question Id : 3405806515 Question Type : MCQ Option Shuffling
: Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

34058026052.

The equation of continuity is simply _____ a balance of a fluid flowing through a stationary volume element

Options :

Momentum

34058026057. 8

Mass

Mass and momentum

34058026059. 8

Mass, momentum, and thennal

34058026060.

Question Number : 36 Question Id : 3405806516 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

In Poiseuille flow, when the flow is fully developed and laminar, the velocity profile is _____

Options :

Circular

34058026061.

✘ Hyperbolic

34058026062.

Parabolic

34058026052.
34058026063.

Linear

34058026064.

Question Number : 37 Question Id : 3405806517 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Plate martensite is observed in _____

Options :

Pure iron

34058026066. 8

Low carbon steels

34058026067. High carbon steels

Steels alloyed with
aluminum ❌

34058026068.

Question Number : 38 Question Id : 3405806518 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

34058026052.

Cross-slip occurs easily in materials with _____

Options :

Low stacking fault

34058026069. 8

energy

High stacking fault energy

34058026070.

Low grain boundary energy

34058026071.

High grain boundary energy

34058026072.

Question Number : 39 Question Id : 3405806519 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following is related to radiation atom heat transfer

Options :

Foulier's law

34058026073. s:

Fick's law

34058026074. 8

Newton's law

34058026075.

Stefan Boltzman law

34058026076.

Question Number : 40 Question Id : 3405806520 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : O

Correct Marks : 1 Wrong Marks : O

has no effect on the hardenability of a steel

Options :

Carbon content

34058026077.

Alloy content

34058026078. 8

Grain size

34058026079. 8

Cold work

34058026080.

Question Number : 41 Question Id : 3405806521 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : O

Correct Marks : 1 Wrong Marks : O

_____ is commonly used as a sacrificial anode to provide

cathodic protection to steel

Options : s: Aluminum

34058026081.

✓ Magnesium

34058026082.

Nickel

34058026083.

Chromium

34058026084.

Question Number : 42 Question Id : 3405806522 Question Type : MCQ Option Shuffling
: Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time
: N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0

_____boundary can be described as an array of screw dislocations

Options :

34058026085. ✖ Tilt

Twin

34058026086.

Twist

34058026087.

Grain

34058026088.

Question Number : 43 Question Id : 3405806523 Question Type : MCQ Option Shuffling
: Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time
: N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0

Heat treatment process of annealing is used to

Options :

Limit the hardness of steel

34058026089.

34058026090. Change the clystalline süucture

Reduce carbon percentage

34058026091.

Soften the steel for manufacturing

34058026092.

Question Number : 44 Question Id : 3405806524 Question Type : MCQ Option Shuffling

: Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None

Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Annealing twins are generally observed in _____ metals

Options :

Body centered cubic

34058026093. 8

Face centered cubic

34058026094.

Hexagonal close packed

34058026095.

Simple cubic

34058026096.

Question Number : 45 Question Id : 3405806525 Question Type : MCQ Option Shuffling

: Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 1 Wrong Marks : 0 can be added for preventing

_____ undesirable chromium carbide precipitation in austenitic stainless steels

Options :

34058026097. Ti and Nb

Ti and Al

34058026098.

34058026099. MO and W

34058026100. ✖ Co and Ni

Question Number : 46 Question Id : 3405806526 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 1 Wrong Marks : 0

acts as a strong graphitiser in Fe-C alloys

Options :

34058026101.8 Niobium

Molybdenum

34058026102.

Silicon

34058026103.

8 Chromium

34058026104.

Question Number : Question Id : 3405806527 Question Type : MCQ Option Shuffling :

Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time

: N.A Think Time : Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

47

N.A

_____ is added to minimize temper embrittlement in high-strength steels

Options :

Molybdenum

34058026105.

Nickel

34058026106. 8

Aluminum

34058026107.

Manganese

34058026108.

Question Number : 48 Question Id : 3405806528 Question Type : MCQ Option Shuffling

: Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following has the lowest melting point

Options :

Question Number : Question Id : 3405806527 Question Type : MCQ Option Shuffling :

Yes Display Question Number : Yes IS Question Mandatory : No Calculator : None
Response Time

: N.A Think Time : Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Pure iron

34058026109.

Mild steel

34058026110.

Stainless steel

34058026111.

34058026112. Cast iron

49

N.A

Homogenization of an ingot is done to eliminate _____

Options :

34058026113. ✖

Macroseggregation

Microseggregation

34058026114.

34058026115. ✖

Porosity

Inclusions

34058026116. 8

Question Number : Question Id : 3405806527 Question Type : MCQ Option Shuffling :

Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time

: N.A Think Time : Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Question Number : 50 Question Id : 3405806530 Question Type : MCQ Option Shuffling
: Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

T

Which of the following is most ductile

Options :

Bainite

34058026117.

Ferrite

34058026118.

Martensite

34058026119.

Pearlite

34058026120. 8

51

N.A

Which of the following heat treatments involves rapid cooling from high
temperatures

Options :

Question Number : Question Id : 3405806527 Question Type : MCQ Option Shuffling :

Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time

: N.A Think Time : Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

34058026121. 8

Annealing

Stress relieving

34058026122.

Tempeling

34058026123.

Solution

34058026124.

treatment

Question Number : 52 Question Id : 3405806532 Question Type : MCQ Option Shuffling

: Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

In titanium alloys, is an isomorphous beta stabilizer

Options :

34058026125.

34058026126.

34058026127. 8

34058026128. 8

Question Number : 53 Question Id : 3405806533 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 1 Wrong Marks : 0

alloys are precipitation hardenable

Options :

Cu-Zn

34058026129.

Cu-Be

34058026130.

8 Cu-Sn

34058026131.

34058026132. 8 Cu-Si

Question Number : 54 Question Id : 3405806534 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 1 Wrong Marks : 0

is an interstitial solute in iron

Options :

8 Cobalt

34058026133.

34058026144.

Aluminum

34058026134.

34058026135. Nitrogen
Silicon

Question Number : 55 Question Id : 3405806535 Question Type : MCQ Option Shuffling
: Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response
Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

In steels, transformation of austenite to _____ does not involve diffusion

Options :

Ferrite

34058026137. 8

Marensite

34058026138.

Bainite

34058026139. 8

Pearlite

34058026140. 8

Question Number : 56 Question Id : 3405806536 Question Type : MCQ Option Shuffling
: Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following metals does not exhibit allotropy

Options :

Iron

34058026144.

34058026141. 8

34058026142. Copper

Titanium

34058026143. 8

Cobalt

Question Number : 57 Question Id : 3405806537 Question Type : MCQ Option Shuffling
: Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0 _____are responsible for precipitation

hardemg in nickel-base superalloys

Options :

Ti and Al

34058026145.

Fe and
Mo

34058026146.

34058026147. s:

Ta and W

Cr and Co

34058026148.

Question Number : 58 Question Id : 3405806538 Question Type : MCQ Option Shuffling
: Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response
Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

34058026144.

is added for enhancing pitting corrosion resistance of austenitic stainless steels

Options :

34058026149. 8 Manganese

Silicon

34058026150. 8

Molybdenum

Titanium

34058026152.

Question Number : 59 Question Id : 3405806539 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

are susceptible to hydrogen embrittlement

Options :

Steels

34058026153.

✘ Nickel-base superalloys

34058026154.

Copper alloys

34058026155. 8

✘ Aluminum alloys

34058026156.

34058026144.

Question Number : 60 Question Id : 3405806540 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0 Correct Marks : 1 Wrong Marks : 0

In white cast iron. carbon is present in the form of

Options :

Cementite

34058026157.

34058026158. s: Graphite flakes

34058026159. 8 Graphite nodules

Graphite rods

34058026160.

Question Number : 61 Question Id : 3405806541 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Constant stress on metal resulting slow plastic deformation is known as

Options :

34058026161. s: Strength

Creep

34058026162.

Endurance

34058026163.

34058026164. ✖ Fatigue

Question Number : 62 Question Id : 3405806542 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Increase in surface hardness after case carburizing is due to_____

Options :

34058026165. ✓ Formation of high-carbon martensite

Formation of hard carbides

34058026166. 8

34058026167. ✘ Formation of a cementite layer

34058026168. ✘ Formation of fine grains

Question Number : 63 Question Id : 3405806543 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Gennan silver is an alloy of _____

Options :

s: Cu-Ni-Al

34058026169.

Cu-Ni-Zn

34058026170.

34058026171. Cu-Ag-Ni

34058026172. Cu-Ag-Zn

Question Number : 64 Question Id : 3405806544 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : O

Correct Marks : 1 Wrong Marks : O

Pure copper precipitation can be utilized for strengthening in_____

Options :

Stainless steels

34058026173.

34058026174. s: Nickel alloys

34058026175. 8 Silver alloys

34058026176. 8 Gold alloys

Question Number : 65 Question Id : 3405806545 Question Type : MCQ Option Shuffling

: Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None

Response Time

: N.A Think Time : N.A Minimum Instruction Time : O

Correct Marks : 1 Wrong Marks : O

Bonding due to transfer of electrons from one atom to another is known as

Options :

34058026177. s:

Metallic bonding

Covalent bonding

34058026178. 8

34058026179.

Ionic bonding

Van der Waals bonding

34058026180.

Question Number : 66 Question Id : 3405806546 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Peritectic reaction is defined as_____

Options :

34058026181. A solid and a liquid reacting to form another solid

34058026182. Two solids reacting to form a liquid

34058026183. Two liquids reacting to form a solid

34058026184. Two solids reacting to form a third solid

Question Number : 67 Question Id : 3405806547 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Spheroidized carbides are found in_____

Options :

34058026185. Rail steels

34058026186. Bearing steels

34058026187. Weathering steels

34058026188. Maraging steels

Question Number : 68 Question Id : 3405806548 Question Type : MCQ Option Shuffling
: Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following exhibits the highest thermal conductivity

Options :

34058026189. 8 Silicon dioxide

34058026190. Silicon nitride

Silicon carbide

34058026191.

Sialon

34058026192. 8

Question Number : 69 Question Id : 3405806549 Question Type : MCQ Option Shuffling
: Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following exhibit highest specific strength

Options :

34058026193. Ti alloys

Al alloys

34058026194. 8

Mg alloys

34058026195. 8

Ni-base superalloys

34058026196.

Question Number : 70 Question Id : 3405806550 Question Type : MCQ Option Shuffling
: Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

_____is widely used in cutting tools

Options :

34058026197. Chromium carbide

34058026198. Titanium carbide

34058026199. Tungsten carbide

34058026200. Silicon carbide

Question Number : 71 Question Id : 3405806551 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0 _____is widely used in paints for improved weather resistance

Options :

TiO₂

34058026201.

SiO₂

34058026202. 8

ZrO₂

34058026203.

34058026204. ✖ A1203

Question Number : 72 Question Id : 3405806552 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following can produce spherical powders

Options :

34058026205. Solid-state
reduction
Gas atomization

34058026206.

Electrolysis

34058026207. ✖

34058026208. 8 Ball milling

Question Number : 73 Question Id : 3405806553 Question Type : MCQ Option Shuffling
: Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response
Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Transmission electron microscopy (TEM) provides much higher resolution
than light microscopy because

Options :

34058026209. Electrons have a much smaller wavelength as compared to visible light

34058026210. ✖ Electrons have a much larger wavelength as compared to visible light

We use very thin specimens in TEM

34058026211. 8

TEM can achieve much higher magnification

34058026212. 8

Question Number : 74 Question Id : 3405806554 Question Type : MCQ Option Shuffling
: Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response
Time

: N.A Think Time : N.A Minimum Instruction Time : O

Correct Marks : 1 Wrong Marks : O

Why scanning electron microscopy (SEM) is better suited for fracture surface examination as compared to light microscopy

Options :

34058026213. 111 SEM, specimen is held in a vacuum chamber to minimize contamination

SEM has a higher depth of focus

34058026214.

SEM doesn't require any sample preparation

34058026215.

34058026216. ✖ SEM can be used for examining even non-conductive materials

Question Number : 75 Question Id : 3405806555 Question Type : MCQ Option Shuffling

: Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : O

Correct Marks : 1 Wrong Marks : O

Which of the following is a shall) break ill the dislocation line and remains in flie slip plane

Options :

34058026217. 8 g

34058026218.

34058026219. Dislocation loop

Frank-read Source

34058026220.

Question Number : 76 Question Id : 3405806556 Question Type : MCQ Option Shuffling

: Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following elements is used to fix sulfur in steels

Options :

34058026221. Cr

34058026222.

34058026223. 8

34058026224. Si

Question Number : 77 Question Id : 3405806557 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Thick steel plates may exhibit poor ductility in thickness direction due to

Options :

✘ Poor bonding between grains

34058026225.

Formation of martensite in the plate center

34058026226. 8

Excessive sulfide and silicate inclusions

34058026227.

✘ Unfavorable grain orientation

34058026228.

Question Number : 78 Question Id : 3405806558 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

How many grains can be counted per square inch at a magnification of 100X

in a material with an ASTM grain size number of 5

Options :

34058026229. 2 32

16

34058026230.

34058026231. 5

✖ 500

34058026232.

Question Number : 79 Question Id : 3405806559 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following can increase the strength of a metallic material without affecting its ductility

Options :

Precipitation hardening

34058026233.

34058026234. 8

Dispersion hardening

Grain refinement

34058026235.

34058026236. ✖ Work hardening

Question Number : 80 Question Id : 3405806560 Question Type : MCQ Option Shuffling

: Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None

Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Which of the following elements is capable of diffusion in steel at room

temperature

Options :

34058026237. Hydrogen

34058026238. Oxygen

Nitrogen

34058026239.

Carbon

34058026240.

Question Number : 81 Question Id : 3405806561 Question Type : MCQ Option Shuffling

: Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None

Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The unit of diffusivity is _____

Options :

1

34058026241. m sec

34058026242. ✎ m sec-

34058026243. [^] -1
m- sec

34058026244. -21
8 m sec

Question Number : 82 Question Id : 3405806562 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Ductile-to-brittle transition temperature of a steel can be lowered by _____

Options :

34058026245. 8 Increasing the carbon content

Increasing the grain size

34058026246. ✎

Increasing the amount of cold work

34058026247. 8

34058026248. Reducing the grain size

Question Number : 83 Question Id : 3405806563 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

What process is necessary to improve fatigue performance by inducing surface compressive forces

Options :

Shot peening

34058026249.

Annealing

34058026250.

34058026251. ✖ Rolling

Case
hardening

34058026252.

Question Number : 84 Question Id : 3405806564 Question Type : MCQ Option Shuffling

: Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None

Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Body Centered Cubic (BCC) crystal has a coordination number of_____

Options :

16

34058026253.

12

34058026254.

8

34058026255.

34058026256. 4

Question Number : 85 Question Id : 3405806565 Question Type : MCQ Option Shuffling

: Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response

Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Slip occurs on_____

Options :

34058026257. 8
s: Non-close-packed planes in non-close-packed directions

34058026258. 8
Non-close-packed planes in close-packed directions

34058026259.
Close-packed planes in close-packed directions

34058026260. 8
Close-packed planes in non-close-packed directions

Question Number : 86 Question Id : 3405806566 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

During tertiary creep, voids nucleate _____

Options :

34058026261. 8 Within the grains over the entire volume of the material

34058026262. 8
On the grain boundaries that are parallel to the tensile stress axis

34058026263.
On the grain boundaries that are perpendicular to the tensile stress axis

34058026264.
On all the grain boundaries over the entire volume of the material

Question Number : 87 Question Id : 3405806567 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Fracture toughness increases with _____

Options :

Decrease in temperature

34058026265. s:

34058026266. Decrease in yield stress

Decrease in strain rate

34058026267.

Increase \propto grain size 34058026268.

Question Number : 88 Question Id : 3405806568 Question Type : MCQ Option Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0
Correct Marks : 1 Wrong Marks : 0
Paris' law relates fatigue crack growth rate to _____

Options :

34058026269. \propto

Stress range

34058026270. 8

Stress intensity Stress amplitude
factor Question Number : 89 Question Id : 3405806569
34058026271. Question Type : MCQ Option Shuffling : Yes
34058026272. Stress ratio Display Question Number : Yes Is Question
Mandatory : No Calculator : None Response

Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

During cyclic loading, which of the following cannot be zero

Options :

34058026273. s: Mean stress

Maximum
stress

34058026274.

Minimum stress

34058026275. 8

34058026276. Stress range

Question Number : 90 Question Id : 3405806570 Question Type : MCQ Option Shuffling
: Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0 testing is commonly used for

detennining the ductile-to-brittle

transition temperature

Options :

34058026277. 8 Tensile

34058026278. Impact

34058026279. 8 Bend

34058026280.

Shear

Question Number : 91 Question Id : 3405806571 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

During tensile testing, the specimen undergoes uniform elongation over the entire gauge length until reaching _____

Options :

Elastic limit

34058026281.

Yield stress

34058026282.

34058026283. Ultimate tensile stress

Fracture stress

34058026284. 8

Question Number : 92 Question Id : 3405806572 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

In forward extrusion, the speed of the extruded product is _____

Options :

34058026280.

Lower than the speed of the ram

34058026285.

Higher than the speed of the ram

34058026286.

s: Same as the speed of the ram

Independent of the speed of the ram

34058026288.

Question Number : 93 Question Id : 3405806573 Question Type : MCQ Option Shuffling

: Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None

Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

The provision of gutters are required in

Options :

34058026289. ✖

Spinning

Exusion

34058026290. s:

Closed die forging

34058026291.

34058026292. 8 Explosive fonning

Question Number : 94 Question Id : 3405806574 Question Type : MCQ Option Shuffling

: Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

34058026280.

: N.A Think Time : N.A Minimum Instruction Time : O

Correct Marks : 1 Wrong Marks : O

Yield point phenomenon is observed in

Options :

Pure iron

34058026293.

34058026294. 8 High carbon steels

Low carbon steels

Stainless steels

34058026296.

Question Number : 95 Question Id : 3405806575 Question Type : MCQ Option Shuffling

: Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : O

Correct Marks : 1 Wrong Marks : O

stainless steels are magnetic

Options :

8 Austenitic

34058026297.

34058026298. 8 Ferritic

Marensitic

34058026299.

34058026280.

Fenitic and maltensitic 34058026300.

Question Number : 96 Question Id : 3405806576 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks :

Cold worked copper shows

Options :

34058026301. 8 Reduced tensile strength

34058026302. Reduced electrical conductivity

34058026303. ✖ Reduced specific heat

34058026304. ✖ Reduced density

Question Number : 97 Question Id : 3405806577 Question Type : MCQ Option Shuffling
: Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Duplex stainless steels contain _____

Options :

Austenite + ferrite 34058026305.

34058026306. Austenite + martensite

Martensite + ferrite

34058026307.

34058026308. Austenite + bainite

Question Number : 98 Question Id : 3405806578 Question Type : MCQ Option Shuffling
: Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None
Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

hardness test method is based on depth of indentation

Options :

34058026309. Blinell
s: Vickers
34058026310.

34058026311. 8

34058026312. Rockwell

Question Number : 99 Question Id : 3405806579 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Thermo-mechanically treated (TMT) bars used for concrete reinforcement

consist of _____ microstructure

Options :

34058026313. Pearlitic case + ferritic core

34058026314. Martensitic case + ferritic core

Bainitic case core ✖ + pearlitic

34058026315.

Ferritic case + martensitic core

34058026316.

Question Number : 100 Question Id : 3405806580 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Addition _____ of to the flux improves the slag detachability in shielded metal arc welding

Options :

CaO

34058026317. s:

MgO

34058026318. ✖

TiO₂

34058026319.

34058026320. ✖ CaF₂

Question Number : 101 Question Id : 3405806581 Question Type : MCQ Option

Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

In which casting process , molten metal is forced into the mould cavity under

high pressure

Options :

Die casting

34058026321.

Investment casting

34058026322.

Centrifugal casting

34058026323.

Shell-mold

34058026324. ✖ casting

Question Number : 102 Question Id : 3405806582 Question Type : MCQ Option

Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Alloys with exhibit higher susceptibility to solidification cracking during fusion welding

Options :

34058026325. s: Higher melting point

Lower melting point

34058026326. 8

34058026327. 8 Narrower freezing range

Wider freezing range

34058026328.

Question Number : 103 Question Id : 3405806583 Question Type : MCQ Option

Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0 Which of the following casting process is used to cast statues

Options :

Slush casting

34058026329.

Centrifugal casting

34058026330.

Sand casting

34058026331.

34058026332. ✖ Centrifuging

Question Number : 104 Question Id : 3405806584 Question Type : MCQ Option

Shuffling : Yes

Question Number :

Display Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : O Correct Marks : 1 Wrong Marks : O _____ can only be used for welding in flat or down-hand position

Options :

34058026333. 8 Shielded metal arc welding

Gas metal arc welding

34058026334. 8

Plasma arc welding

34058026335.

Submerged arc

34058026336. welding

Question Number : 105 Question Id : 3405806585 Question Type : MCQ Option

Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : O

Correct Marks : 1 Wrong Marks : O

The use of the sand muller in sand casting is for

Options :

34058026337. ✖ Sand ramming

Sand mixing

34058026338.

34058026339. 8 Making vent holes

Core making

34058026340.

Question Number : Question Id : 3405806586 Question Type : MCQ Option
Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No
Calculator : None Response Time

: N.A Think Time : Minimum Instruction Time : 0

Correct Marks : 1 Marks : 0
106

N.A
Wrong

Use of steel fasteners for joining stainless steel plates can cause _____

Options :

34058026341. Galvanic corrosion of stainless steel plates

34058026342. Galvanic corrosion of steel fasteners

34058026343. Intergranular corrosion of stainless steel plates

34058026344. Intergranular corrosion of steel fasteners

Question Number : 107 Question Id : 3405806587 Question Type : MCQ Option
Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator :
None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

To improve directional solidification in casting is provided _____

Question Number : Question Id : 3405806586 Question Type : MCQ Option
Shuffling : Yes Display Question Number : Yes IS Question Mandatory : No
Calculator : None Response Time

: N.A Think Time : Minimum Instruction Time : 0

Correct Marks : 1 Marks : 0

Options :

34058026345. 8 Chaplets

34058026346. 8 Core print

34058026347. Chills

Spmce

34058026348. 8

108

N.A

Wrong

M'llicll of the following is widely used as a brazing filler

Options :

Cu-Al

34058026349. s:

Cu-

Ag

34058026350.

Cu-Ni

34058026351.

34058026352. 8 Cu-Cr

Question Number : Question Id : 3405806586 Question Type : MCQ Option
Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No
Calculator : None Response Time

: N.A Think Time : Minimum Instruction Time : 0

Correct Marks : 1 Marks : 0

Question Number : 109 Question Id : 3405806589 Question Type : MCQ Option
Shuffling : Yes
Display Question Number : Yes Is Question Mandatory : No Calculator : None Response
Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Thread rolling is used for

Options :

Ductile materials

34058026353.

Brittle materials

34058026354. 8

Hard materials

34058026355.

Composite materials

34058026356.

110

N.A

Wrong is a suitable technique for monitoring fatigue crack

growth

Options :

Question Number : Question Id : 3405806586 Question Type : MCQ Option
Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No
Calculator : None Response Time

: N.A Think Time : Minimum Instruction Time : 0

Correct Marks : 1 Marks : 0

Acoustic emission

34058026357.

Radiographic inspection

34058026358, 8

34058026359. Magnetic particle inspection

Liquid penetrant testing

34058026360.

Question Number : 111 Question Id : 3405806591 Question Type : MCQ Option

Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response
Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Wrinkling defect is generally observed in

Options :

34058026361. 8 Rolled components

34058026362. Deep drawing components

Question Number : Question Id : 3405806586 Question Type : MCQ Option

Shuffling : Yes Display Question Number : Yes IS Question Mandatory : No

Calculator : None Response Time

: N.A Think Time : Minimum Instruction Time : 0

Correct Marks : 1 Marks : 0

Forged components

34058026363.

Number

3405806592 Question Type : MCQ Option Shuffling : Yes

Question

Mandatory : No Calculator : None Response Time

34058026364. ✖ Extruded components

Question : 112 Question Id :

Display Number : Yes Is Question

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0 _____ alloys are not

well-suited for high-pressure die casting

Options :

34058026365. Al

34058026366. ' g

34058026367.

Zn

34058026368. 8

Question Number : 113 Question Id : 3405806593 Question Type : MCQ Option

Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Invar is known for its _____

Options :

34058026369. Very' low coefficient of thermal expansion

34058026372.

Question Number 3405806594 Question Type : MCQ Option Shuffling : Yes

Display Question Mandatory : No Calculator : None Response Time

34058026370. 8 Very low thermal conductivity

34058026371. ✖ Very high creep strength
s: Very high toughness

: 114 Question Id :

Number : Yes Is Question

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

alloys are commonly used for casting

Options :

Al-Cu

34058026373.

✖ Al-Mn

34058026374.

34058026375. s: Al-Mg

Al-Si

34058026376.

34058026372.

Question Number 3405806594 Question Type : MCQ Option Shuffling : Yes

Display Question Mandatory : No Calculator : None Response Time

Question Number : 115 Question Id : 3405806595 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Laser surface hardening works most effectively for _____

Options :

34058026377. 8 Cu-Ni alloys

Austenitic stainless steels

34058026378. 8

34058026379. Steels

8 Al-Cu alloys

: 116 Question Id :

Number : Yes Is Question

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

_____ steels are commonly used for steam tubing in thermal power plants

Options :

34058026381. Cr-Mo

34058026372.

Question Number 3405806594 Question Type : MCQ Option Shuffling : Yes

Display Question Mandatory : No Calculator : None Response Time

C-Mn

34058026382.

Ni-M0

34058026383.

Si

34058026384.

Question Number : 117 Question Id : 3405806597 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Dual phase steels are specifically developed for _____

Options :

Marine applications

34058026385. 8

✘ Electronic applications

34058026386.

Automotive applications 34058026387.

s: Biomedical applications

34058026372.

Question Number 3405806594 Question Type : MCQ Option Shuffling : Yes

Display Question Mandatory : No Calculator : None Response Time

: 118 Question Id :

Number : Yes Is Question

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Stress formed in the work piece due to different process are given below,

Match them

Metal forming process

Type of stress

A) Wire Drawing

P) Tensile

B) Blanking

Q) Tensile and compressive

C) Deep drawing

R) Shear

Options :

34058026389. ✖ A-P, B-Q. C-R

A-Q, B-R, C-P

34058026390. 8

A-P, B-R, c-Q

34058026391.

A-Q B-P, C-R

34058026392. 8

Question Number : 119 Question Id : 3405806599 Question Type : MCQ Option Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

Ship impellers are commonly made of _____

Options :

34058026393. ✖ Manganese bronze

Phosphor
bronze

✖

34058026394.

Silicon bronze

34058026395.

Nickel alummum bronze

34058026396.

Question Number : 120 Question Id : 3405806600 Question Type : MCQ Option

Shuffling : Yes

Display Question Number : Yes Is Question Mandatory : No Calculator : None Response
Time

: N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 1 Wrong Marks : 0

_____technique can be used for measuring residual stress In metallic
components

Options :

X-ray diffraction

34058026397.

Optical emission spectroscopy

34058026398.

34058026399. ✖ Electron microscopy

Electron back-scattered
diffraction

34058026400.