

Unit 2 - Week 0

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Assignment 0

The due date for submitting this assignment has passed. As per our records you have not submitted this assignment.

Due on 2020-09-14, 23:59 IST.

- How much steel is there in a typical family car?

a) 500 kg or less
b) 500-750 kg
c) 750-800 kg
d) Over 1000 kg

a.
 b.
 c.
 d.

No, the answer is incorrect.
Score: 0
Accepted Answers: c
- Which country is the world's biggest exporter of scrap?

a) China
b) Japan
c) USA
d) UK

a.
 b.
 c.
 d.

No, the answer is incorrect.
Score: 0
Accepted Answers: c
- What is the average level of per capita steel demand worldwide?

a) ~25 kg
b) ~50 kg
c) ~100 kg
d) ~200 kg

a.
 b.
 c.
 d.

No, the answer is incorrect.
Score: 0
Accepted Answers: d
- What is the largest end-use application of steel?

a) Mechanical engineering
b) Construction industry
c) Transport industry
d) Domestic appliances

a.
 b.
 c.
 d.

No, the answer is incorrect.
Score: 0
Accepted Answers: a
- Year 2019 world crude steel production was:

a) Less than 1000 million tonnes
b) 1000-1250 million tonnes
c) 1250 - 1500 million tonnes
d) Over 1500 million tonnes

a.
 b.
 c.
 d.

No, the answer is incorrect.
Score: 0
Accepted Answers: d
- What is the approx density of steel?

a) ~5 tonnes/cubic metre
b) ~6 tonnes/cubic metre
c) ~7 tonnes/cubic metre
d) ~8 tonnes/cubic metre

a.
 b.
 c.
 d.

No, the answer is incorrect.
Score: 0
Accepted Answers: d
- Stainless steel demand is mostly in the form of...

a) Flat products
b) Long products
c) Tube products
d) No particular form

a.
 b.
 c.
 d.

No, the answer is incorrect.
Score: 0
Accepted Answers: a
- What is the approximate melting point of carbon steel?

a) ~950 degrees C
b) ~1150 degrees C
c) ~1350 degrees C
d) ~1525 degrees C

a.
 b.
 c.
 d.

No, the answer is incorrect.
Score: 0
Accepted Answers: d
- Which is closest to the purest form of the iron?

a) Cast Iron
b) Wrought Iron
c) Pig Iron
d) Steel

a.
 b.
 c.
 d.

No, the answer is incorrect.
Score: 0
Accepted Answers: a
- The product of a commercial direct reduction process of iron ore is:

a) Liquid iron
b) Pig iron
c) Sponge iron
d) Iron saturated with carbon.

a.
 b.
 c.
 d.

No, the answer is incorrect.
Score: 0
Accepted Answers: c
- The second most widely spread economic iron bearing mineral is

a) Siderite
b) Hematite
c) Magnetite
d) Limonite

a.
 b.
 c.
 d.

No, the answer is incorrect.
Score: 0
Accepted Answers: b
- Which one of the following is right type of fuel needed to run blast furnace?

a) Coal
b) Coke
c) Ferro coke
d) Charcoal

a.
 b.
 c.
 d.

No, the answer is incorrect.
Score: 0
Accepted Answers: b
- India's rank in steel production in the world

a) First
b) Second
c) Third
d) Fourth

a.
 b.
 c.
 d.

No, the answer is incorrect.
Score: 0
Accepted Answers: b
- Top DRI producing nation is

a) South Korea
b) Japan
c) China
d) India

a.
 b.
 c.
 d.

No, the answer is incorrect.
Score: 0
Accepted Answers: d
- With reference to a spontaneous process, identify the correct option(s):
(A) is always exothermic
(B) is always endothermic
(C) is represented by entropy increase of an isolated system
(D) is represented by negative free energy change

A.
 B.
 C.
 D.

No, the answer is incorrect.
Score: 0
Accepted Answers: C, D
- Identify the correct option(s) with respect to Fick's first law of diffusion:
(A) the mass flux of a species through a solid body
(B) the mass flux of a species across the concentration boundary layer at heterogeneous interface
(C) It solves the species concentration distribution in a solid body
(D) It solves the species concentration distribution in liquid body

A.
 B.
 C.
 D.

No, the answer is incorrect.
Score: 0
Accepted Answers: A, B
- Identify the correct option(s) with respect to a first order kinetics:
(A) The rate is directly proportional to concentration
(B) The rate does not depend on concentration
(C) If the integral form is represented by: $\ln\left(\frac{C_{A0}}{C_A}\right) = kt$
(D) It is always chemically controlled

A.
 B.
 C.
 D.

No, the answer is incorrect.
Score: 0
Accepted Answers: A, C
- With respect to oxide Ellingham diagram, identify the correct sentence(s):
(A) It provides the linear variation standard free energy changes of metal oxides against temperature
(B) The slope of such lines are usually negative for solid metal oxides
(C) A metal of an oxide placed lower in position can reduce any oxide placed above it.
(D) Stable oxides occupy the upper and less stable oxides occupy the lower positions in such diagram

A.
 B.
 C.
 D.

No, the answer is incorrect.
Score: 0
Accepted Answers: A, C
- With respect to 1 wt. % standard state, identify the correct option(s):
(A) In metallurgical system, the activities of solutes like C, Si, Mn, S, P in liquid iron is conveniently expressed in terms of 1 wt.% standard state.
(B) In this standard state, activity is directly proportional to wt.% and is unity at 1 wt.%
(C) The scale in which these activities are represented is call Henrian scale
(D) If the solute concentration exceeds 1 wt. %, the activity cannot be expressed in this scale.

A.
 B.
 C.
 D.

No, the answer is incorrect.
Score: 0
Accepted Answers: A, B, C
- Match the metals with their ores

(A) Iron	(i)	Chalcopyrite
(B) Aluminum	(ii)	Hematite
(C) Copper	(iii)	Bauxite
(D) Titanium	(iv)	

1. (A)-(iii); (B)-(iv); (C)-(ii); (D)-(i)
2. (A)-(ii); (B)-(iv); (C)-(i); (D)-(iii)
3. (A)-(ii); (B)-(i); (C)-(iv); (D)-(iii)
4. (A)-(ii); (B)-(i); (C)-(iii); (D)-(iv)

1.
 2.
 3.
 4.

No, the answer is incorrect.
Score: 0
Accepted Answers: 2