All ores are minerals but, not all minerals are ores because?
A. The extraction of the metal from the mineral is not economically viable.
B. The mines of the ores are too deep.
C. The minerals are complex compounds.
D. All of the above are correct.
ANSWER: A

Which of the following is the crudest form of iron?
A. Dead mild steel
B. Wrought iron
C. Cast iron
D. Pig iron
ANSWER: D

Cast iron is a product of?
A. Bessemer converter
B. Cupola
C. Blast Furnace
D. Open hearth furnace
ANSWER: B

In the blast furnace, the charge consists of a mixture of?
A. Hydrated Iron Oxides + dolomite + coke.
B. Calcined Iron Oxides + lime + anthracite coal.
C. Iron pyrites + lime + bituminous coal.
D. Calcined Iron Oxides + limestone + coke.
ANSWER: D

The smelting of Iron in the blast furnace includes the following processes, except?
A. Oxidation
B. Reduction.
C. Decomposition.
D. Sublimation.
ANSWER: D

In a blast furnace Iron Oxide is reduced by?
A. Lime.
B. Carbon Monoxide.
C. Carbon.
D. Silica.
ANSWER: B

During extractive metallurgy of iron, flux is a substance used to convert?
A. Soluble impurities to insoluble impurities.
B. Fusible impurities to infusible impurities.
C. Minerals to silicate.
D. Infusible impurities to fusible impurities.
ANSWER: D

The function of the flux added during smelting is?
A. To make reduction easier.
B. To remove gangue.
C. To save energy.
D. To precipitate slag.
ANSWER: B

During extraction of Iron from its ore, if the gangue associated with the ore is silica, then?
A. A basic flux is needed.
B. An acidic flux is needed.
C. No flux is needed.
D. Both acidic and basic fluxes are needed.
ANSWER: A

Which of the following material has the carbon varying from 4.3 to 6.67%?
A. Mild Steel
B. Pig Iron
C. Cast Iron
D. Medium carbon steel
ANSWER: B

Which of the following material has the carbon varying from 2.1 to 4.3%?
A. Mild steel
B. Dead steel
C. Cast iron
D. Medium carbon steel
ANSWER: C

Which material from the following has a non-crystalline structure?
A. Quartz
B. Silica Glass
C. Tungsten
D. Iron
ANSWER: B

Linear defects, in metal crystal lattice can be explained as?
A. dislocations in metallic crystals.
B. Grain boundaries in metallic crystals.
C. Vacancies in metallic crystals.
D. Substitution impurity atoms.
ANSWER: A

Which of the following classes of defects is due missing or irregularly placed atoms in a crystal lattice?
A. 0-Dimensional
B. 1-Dimensional
C. 2-Dimensional
D. 3-Dimensional
ANSWER: A

The difference between the number of atoms in a unit cell of a BCC crystal and an FCC crystal is?
A. 1
B. 2
C. 4
D. 6
ANSWER: B

When BCC iron is heated, it changes to FCC iron resulting in?
A. Contraction in volume
B. Increase in volume
C. No change in volume
D. Crack in the material
ANSWER: A

Hot working process is the plastic deformation of metal which is carried out?
A. Below the recrystallization temperature
B. Above the recrystallization temperature
C. At temperature equals to boiling point of water
D. None of the above
ANSWER: B

Cold Working of Steel is defined as working?
A. At its Recrystallization Temperature
B. Above its Recrystallization Temperature
C. Below its Recrystallization Temperature
D. At two thirds of the melting temperature of the metal
ANSWER: C

Which Of The Following Is Not Improved By Cold Working Of Metals?
A. Hardness
B. Toughness
C. Surface Finish
D. Corrosion Resistance
ANSWER: D

The recrystallization temperature can be which of the following?
A. Below 0.3 T_m
B. Between 0.5 T_m and 0.75 T_m
C. Below 0.5 T_m
D. Above 0.75 T_m
Answer: B

Cold Working of steel increases?
A. Yield Strength
B. Tensile Strength
C. Hardness
D. All of The Above
ANSWER: D