

## Metallurgy

## JEE Main 2020 Chapterwise

### Questions with Answer Keys

### Chemistry

#### Q1 JEE Main 2020 - 6 September (Morning)

The incorrect statement is

- (A) bronze is an alloy of copper and tin
- (B) cast iron is used to manufacture wrought iron
- (C) german silver is an alloy of zinc, copper and nickel
- (D) brass is an alloy of copper and nickel

#### Q2 JEE Main 2020 - 2 September (Evening)

Cast iron is used for the manufacture of

- (A) wrought iron, pig iron and steel
- (B) pig iron, scrap iron and steel
- (C) wrought iron and pig iron
- (D) wrought iron and steel

#### Q3 JEE Main 2020 - 4 September (Morning)

Among statements (a) - (d), the correct ones are

- (a) lime stone is decomposed to CaO during the extraction of iron from its oxides.
- (b) In the extraction of silver, silver is extracted as an anionic complex.
- (c) Nickel is purified by Mond's process.
- (d) Zr and Ti are purified by Van Arkel method.

- (A) (a), (c) and (d) only
- (B) (c) and (d) only
- (C) (b), (c) and (d) only
- (D) (a), (b), (c) and (d)

#### Q4 JEE Main 2020 - 4 September (Evening)

The processes of calcination and roasting in metallurgical industries, respectively, can lead to

- (A) Global warming and photochemical smog
- (B) Photochemical smog and ozone layer depletion
- (C) Photochemical smog and global warming
- (D) Global warming and acid rain

**Q5 JEE Main 2020 - 5 September (Morning)**

An Ellingham diagram provides information about

- (A) the temperature dependence of the standard Gibbs energies of formation of some metal oxides
- (B) the pressure dependence of the standard electrode potentials of reduction reactions involved in the extraction of metals
- (C) the conditions of pH and potential under which a species is thermodynamically stable
- (D) the kinetics of the reduction process

**Q6 JEE Main 2020 - 5 September (Evening)**

Boron and silicon of very high purity can be obtained through

- (A) vapour phase refining
- (B) electrolytic refining
- (C) liquation
- (D) zone refining

**Q7 JEE Main 2020 - 6 September (Evening)**

The element that can be refined by distillation is

- (A) gallium
- (B) nickel
- (C) zinc
- (D) tin

**Q8 JEE Main 2020 - 7 January (Morning)**

Purest form of commercial iron is:

- (A) Wrought iron
- (B) Cast iron
- (C) Pig iron
- (D) Iron scrap + pig iron

**Q9 JEE Main 2020 - 7 January (Evening)**

Metal with low melting point containing impurities of high melting point can be purified by

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(A) Zone refining

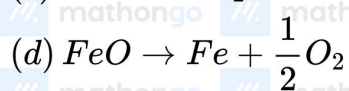
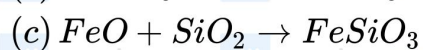
(B) Vapor phase refining

(C) Distillation

(D) Liquefaction

#### Q10 JEE Main 2020 - 8 January (Evening)

Among the reactions (a) - (d), the reaction(s) that does/do not occur in the blast furnace during the extraction of iron is/are



(A) a & b

(B) a, b & c

(C) c & d

(D) a, b, c, d

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### Chemistry

## Answer Key

Q1 (D)

Q2 (D)

Q3 (D)

Q4 (D)

Q5 (A)

Q6 (D)

Q7 (C)

Q8 (A)

Q9 (D)

Q10 (C)

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