

## Metallurgical Kinetics and Energy Objective Questions and Answers

For a zero order reaction, concentration of product increases with the

- a. Increase of reaction time
- b. Increase in initial concentration
- c. Increase in total pressure
- d. Decrease in total pressure

As: A

2. Reactions with high activation energy are

- a. Very temperature sensitive
- b. Temperature insensitive
- c. Always irreversible
- d. Always reversible

Ans: A

3. Fluidised bed reactor is characterised by

- a. Uniformity of temperature
- b. Comparatively smaller equipment
- c. Very small pressure drop
- d. Absence of continuous catalyst regeneration facility

Ans: A

4. Catalyst carriers

- a. Have very high selectivity
- b. Increase the activity of a catalyst
- c. Provide large surface area with a small amount of active material
- d. Inhibit catalyst poisoning

Ans: C

5. As the chemical reaction proceeds, the rate of reaction
- increases
  - decreases
  - remains same
  - may increase or decrease, depending on the type of reaction

Ans: B

6. Pick out the correct statement.
- Reactions with high activation energies are very temperature sensitive
  - Chemical equilibrium is a static state
  - A photochemical reaction is catalysed by light
  - A chemical reaction occurs when the energy of the reacting molecule is less than the activation energy of the reaction

Ans: A

7. Carrier in a catalyst increases its
- Surface area
  - Activity
  - Performance
  - Fusion resistance

Ans: A

8. Radioactive decay follows the \_\_\_\_\_ order kinetics.
- first
  - second
  - third
  - zero

Ans: A

9. In an exothermic chemical reaction, the reactants compared to the products have

- a. higher temperature
- b. more energy
- c. less energy
- d. same energy

Ans: B

10. Photochemical reactions occur in the presence of

- a. Sunlight
- b. Darkness
- c. Solid catalysts
- d. Monochromatic radiation only

Ans: A

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