Assignment 3

The due date for submitting this assignment has passed.

As per our records you have not submitted this assignment.

1) The morphological features in synthetic polymer are usually within our control, we can smoothen them, influence them and change them to our design.
   - True
   - False
   No, the answer is incorrect. Score: 0
   Accepted Answers: True

2) The rate of reaction is not the function of
   - Reacting material
   - Temperature
   - Concentration
   - Type of reactor used
   No, the answer is incorrect. Score: 0
   Accepted Answers: Type of reactor used

3) The polymer morphology can be
   - Crystalline
   - Semi-crystalline
   - Amorphous
   - All of the above
   No, the answer is incorrect. Score: 0
   Accepted Answers: All of the above

4) Choose the incorrect one from the following statements
   - Lamellae (Flat ribbon like structure) grows to dimensions of 1 micrometer by addition of segments and have the symmetry of unit cell geometry (hexagonal, orthorhombic etc.)
   - Spherulites are spherical arrangement of lamella which grow radially from central nucleus.
   - Helical structure is dictated by the internal energy of the chain and by the packing of the parallel helices in the unit cell.
   - None of the above
   No, the answer is incorrect. Score: 0
   Accepted Answers: None of the above

5) Which of the following statement is correct regarding the contacting phases of the flowing fluids in the reactor.
   - The mixing of young fluid elements with old fluid at the entrance of the reactor is a lot of time is there for reaction to proceed which results in high conversion of reactants. The phenomena is termed as early mixing.
   - The mixing of fluid at the outlet of the reactor, thus no time is there for the reaction of the reactants which results in lesser conversion of reactants, the phenomena is called late mixing.
   - Clumpiness and state of aggregation is the part of the contacting phase in the liquid-gas or gas-liquid system.
   - None of the above
   No, the answer is incorrect. Score: 0
   Accepted Answers: None of the above

6) For homogeneous reaction system, the variables affecting the rate of reaction are
   - Temperature
   - Composition
   - Pressure
   - All of the above
   No, the answer is incorrect. Score: 0
   Accepted Answers: All of the above

7) The molecularity of the reaction can be defined by:
   - The number of reactant molecules, atoms or ions that take part in the balanced chemical reaction
   - On the basis on the collision theory, it can be termed as micro-molecular, bi-molecular and tri-molecular so, it can’t be fractional
   - The molecularity is only for the elementary reactions.
   - All of the above
   No, the answer is incorrect. Score: 0
   Accepted Answers: All of the above

8) In the following statement which is incorrect
   - In the Arrhenius law the reaction rate constant is directly proportional to the temperature
   - In the collision theory the reaction rate constant is directly proportional to the square root of the temperature term.
   - In the transition state theory the reaction rate constant is directly proportional to temperature term.
   - The collision theory is based on the kinetic theory of gases.
   No, the answer is incorrect. Score: 0
   Accepted Answers: In the Arrhenius law the reaction rate constant is directly proportional to the temperature

9) The unit dimensions of the reaction rate constant k for nth order homogeneous reaction are
   - [time]^-n [concentration]^n
   No, the answer is incorrect. Score: 0
   Accepted Answers: [time]^-n [concentration]^n

10) X-Ray Diffraction techniques used for
    - Structure determination
    - Controllability determination
    - Crystallite size and disorder
    - All of the above
    No, the answer is incorrect. Score: 0
    Accepted Answers: All of the above