

35. The concentration of the initial substance A at the reactor inlet is 10 mol/L. The concentration of the product at the outlet of the reactor is 4 mol/L. The process is characterized by a stoichiometric equation: $2A = B$. Determine the yield of product B :

- A) 0.80;
- B) 0.95;
- C) 0.68;
- D) 0.75;
- E) 0.67.

36. The concentration of the initial substance A at the reactor inlet is 15 mol/L. The concentration of the product B at the outlet of the reactor is 9.5 mol/L. The process is characterized by a stoichiometric equation: $2A = B$. Determine the yield of product B :

- A) 1.27;
- B) 0.94;
- C) 1.33;
- D) 0.99;
- E) 1.17.

37. The concentration of raw material A at the reactor inlet was 12.45 mol/L. At the outlet of the reactor, the concentration of the initial substance A was 4 mol/L, and the target product B - 6 mol/L. Determine the selectivity of the process for the target product B , if the process is described by the equations: $2A \rightarrow B$; $A \rightarrow C$.

- A) 1.45;
- B) 0.98;
- C) 1.53;
- D) 1.41;
- E) 1.46.

38. The concentration of raw material A at the reactor inlet was 15.0 mol/L. At the outlet of the reactor, the concentration of the initial substance A was 1 mol/L, and the target product B - 7 mol/L. Determine the selectivity of the process for the target product B , if the process is described by the equations: $2A \rightarrow B$; $A \rightarrow C$.

- A) 1.08;
- B) 0.99;
- C) 0.97;
- D) 1.00;
- E) 1.12.

39. Substances and materials intended for processing in industrial production are called:

- A) raw materials;
- B) intermediate product;
- C) by-product;
- D) waste;
- E) reagents.

40. Substances formed during the processing of raw materials along with the target product, but not the purpose of this production are called:

- A) intermediate;
- B) raw materials;
- C) by-product;
- D) waste;
- E) slags.