1. **Basic characteristics and features of Field-Level Industrial Communication Networks.**
   - types of messages exchanged;
   - type of information;
   - real-time operation demands;
   - typical applications.

2. **Controller Area Network (CAN):**
   - physical layer, topology, baudrate/distance;
   - broadcast communication;
   - hardware, cables;
   - data frame format;
   - CSMA/CA method, message IDs, priority of messages;
   - error checking.

3. **Object-Oriented Field-Level Specifications - DeviceNet**
   - DeviceNet and CAN;
   - topology, baudrate/distance;
   - DeviceNet data frame, error checking (CRC, frame error, ACK, bit stuffing);
   - hardware - DeviceNet node hardware structure;
   - cables, power on the network;
   - Device object model: class, object, instance, attribute, behaviour, Application Objects, Connection Objects;
   - required and optional object in a device;
   - messaging Formats: Explicit, Polled, Strobed, Change-of-State, Cyclic;
   - master/slave scheme;
   - peer-to-peer scheme;
   - DeviceNet scanners.