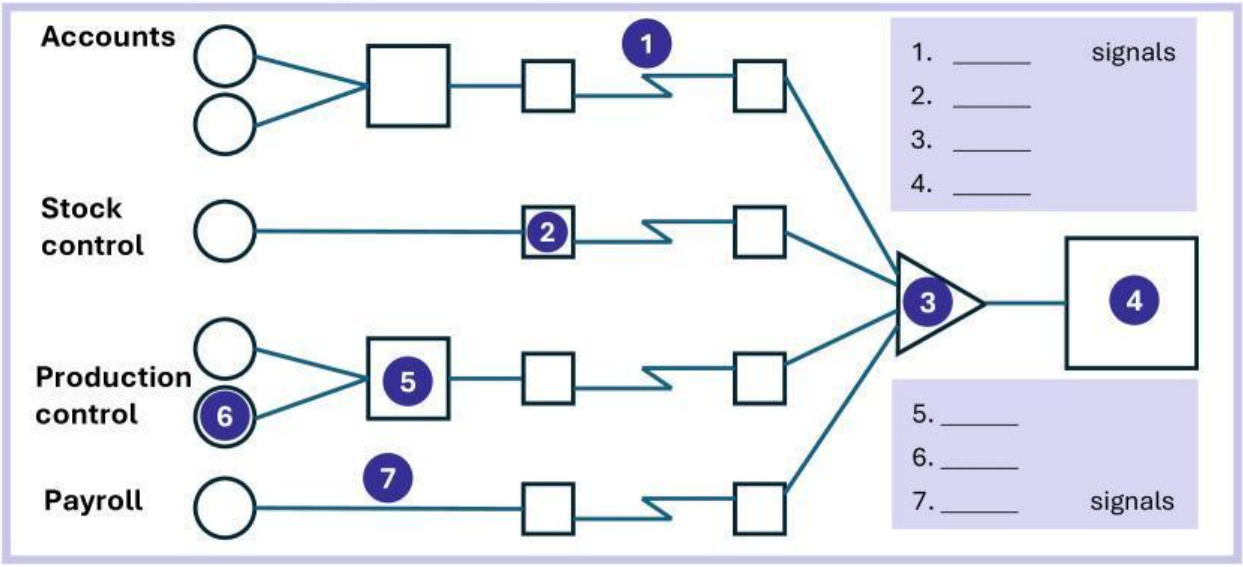
Reading – DATA TRANSMISSION

Task 10

Task 10: Using the completed definitions from **Task 9** and the information in the text ("Analog transmission"), fill in the gaps in this diagram.



Analog transmission

The older telephone systems function on the basis of analog signals representing voice modulation patterns which are represented by variations in wave forms. When using telephone lines for transmitting data by terminal to a computer, the digital signals from the terminal need to be converted to analog signals by an acoustic coupler or modem prior to transmission. A modem is a device which serves a dual purpose because it acts as a MOdulator (digital to analog) and DEModulator (analog to digital), hence the name MODEM. An analog communication system requires a modem at either end of the communication line. When the signals are received by the distant computer, the signals are reconverted to digital form prior to being input for processing.

1. An acoustic coupler converts	the electrical signal from the computer into a coded sound signal which is picked up by the telephone microphone.	It then works as a modem.
2. A modem can convert	a digital bit stream into an analog signal over an analog communication channel (telephone circuit).	It then converts incoming analog signals back into digital signals.
3. A cluster controller may control	several terminals in one location, connecting each of them to a modem.	This connection is made on a shared line basis.
4. A multiplexor receives	multiple signals from various terminals and combines them in data frames for transmission on a single high-speed line to the computer.	In the computer the data frames are then separated again.
5. A gateway interconnects	two or more networks, enabling data transfers to be made.	It may act as a translator between incompatible networks, protocols, or software.

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