# CCNA Voice Practice Tests &ndash; PSTN components and technologies (6-10)

**Topic 2 ? Describe PSTN components and technologies. (15 Questions)** 6: A PRI (Primary Rate Interface) is a telecommunication standard used in the Integrated Services Digital Network or ISDN, for carrying multiple DS0 voice and data transmissions between two physical locations. PRI was developed specifically for industrial or large quantity users. PRI is an industrial ISDN line while the Basic Rate Interface, or BRI, is used to cater to home and small enterprises. Which three characteristics apply to ISDN PRI? (Choose three.)    A.PRI offers 20 B channels and 1 D channel    B.the D channel is 64 kbps    C.can carry data, voice, or video    D.can carry vendor-specific PBX features    Answer: B C D Explanation:    In the Integrated Services Digital Network (ISDN), there are two levels of service: the Basic Rate Interface (BRI) and the Primary Rate Interface (PRI). Both rates include a number of B-channels and a D-channel. Each B-channel carries data, voice, and other services. The D-channel carries control and signaling information. The Primary Rate Interface consists of 23 B-channels and one 64 kbit/s D-channel using a T1 line (North American standard) or 30 B-channels and one D-channel using an E1 line (Europe/Rest of World). The Primary Rate Interface channels are typically used by medium to large enterprises with digital PBXs to provide them digital access to the Public Switched Telephone Network (PSTN).  **7:** You are CCNA VOICE associate in Lead2pass.com. Which step of digitizing analog signals does this represent based on the following information?
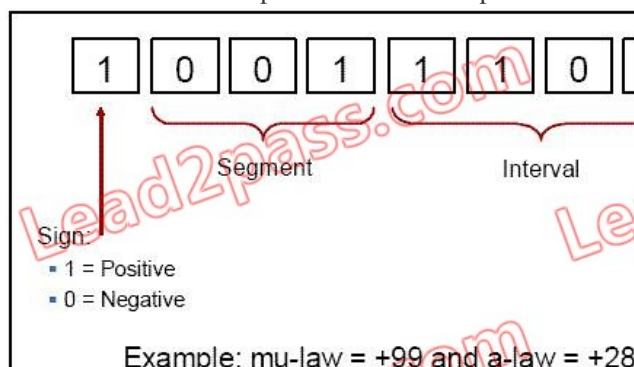


A.encoding   B.quantization   C.signal sample   D.signal compression   Answer: A    Explanation:    This question tests the digitallization process of analog voice.    The steps:    1. Signal sample: In signal processing, sampling is the reduction of a continuous signal to a discrete signal;    2. Quantization: In digital signal processing, quantization is the process of approximating a continuous range of values by a relatively small set of discrete symbols or integer values;    3. Encoding: encoding the quantized bit stream into transmittable bit stream;    4. Signal compression: data compression for transmission optimization.    The exhibit shows using 8bits to mark a timeslot (i.e. encoding).    **8:** Refer to the exhibit. Which step of digitizing analog signal does this represent?



A.signal sample   B.encoding   C.sample quantization   D.8-bit digital encoding   Answer: A    Explanation:    This question tests the digitallization process of analog voice.    The steps:    1. Signal sample: In signal processing, sampling is the reduction of a continuous signal to a discrete signal;    2. Quantization: In digital signal processing, quantization is the process of approximating a continuous range of values by a relatively small set of dis  **9:** You are CCNA VOICE associate in Lead2pass.com. What is the difference between a PBX and a keysystem under the Device tab?    A.each phone has nearly identical configuration in PBX  but a keysystem has a unique extension for each phone.    B.each phone has a unique extension in PBX but a keysystem has nearly identical configurations for each phone.    C.A PBX operates 24x7 and requires no activation.    D.A keysystem can be activated only by the operator by turning the Systemkey.    Answer: B    Explanation:    This question tests the difference between PBX and

keysystem.    PBX and keysystem are two typical working modes of traditional voice.    PBX mode: Each Phone has its own independent configuration and number. It initiates a call by dialing corresponding numbers and then calls via PBX Switches route. For a coming call, PBX Switches will route the corresponding phones of the call channel according to called numbers.    Keysystem mode: Each button has a corresponding number. It initiates a call only by pressing the corresponding buttons and the call will be routed to all phones owning the button. It is the same for an incoming call. A call can be routed to all phones.    Summary:    A phone of PBX system can initiate and receive multiple calls. A phone of Keysystem can initiate multiple calls and a call can be routed simultaneously to multiple phones.    Thus, the correct answer is B. In PBX systems, each phone has its own extension. In Keysystems, each button has an extension and the phone with the same button has the same configuration. PBXs are differentiated from "key systems" in that users of key systems manually select their own outgoing lines, while PBXs select the outgoing line automatically.  **10:** E.164 is an ITU-T recommendation which defines the international public telecommunication numbering plan used in the PSTN and some other data networks. It also defines the format of telephone numbers. E.164 numbers can have a maximum of fifteen digits and are usually written with a + prefix. To actually dial such numbers from a normal fixed line phone the appropriate international call prefix must be used. Which of the following is not the  part of the e.164 number in the ITU-T numbering plan for geographic areas?    A.national destination code    B.station code    C.country code    D.subscriber number Answer: B    Explanation:    A numbering plan is a type of numbering scheme used in telecommunications. This is a set of rules used for making numbers. Most telephone numbers belong to the E.164 numbering plan. The E.164 numbering plan for telephone numbers includes:    Country calling codes;    National destination code;    Subscriber number.