

**1. Modify the following texts so that the statements are true:**

The (~~packet~~  
**circuit**) switched services provide (~~data message fragmentation~~  
**dedicated path reservation**) for (**audio**  
~~VoIP~~) calls.

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The (~~packet~~  
**circuit**) switched services interwork with (~~Internet~~  
**PSTN**).

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**circuit**) switched services interwork with (**Internet**  
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The UTRAN network topology follows the (~~star~~  
**mash**) model whereas evolved UTRAN points to (**star**  
~~mash~~) topology.

User identification and addressing based on (**IP address**  
~~IMSI and MSISDN~~) is processed in (**HSS**  
~~HLR~~).

In LTE, (**IP packets**  
~~VoIP calls~~) are forwarded through the (~~IMS service~~  
**GTP tunnel**).

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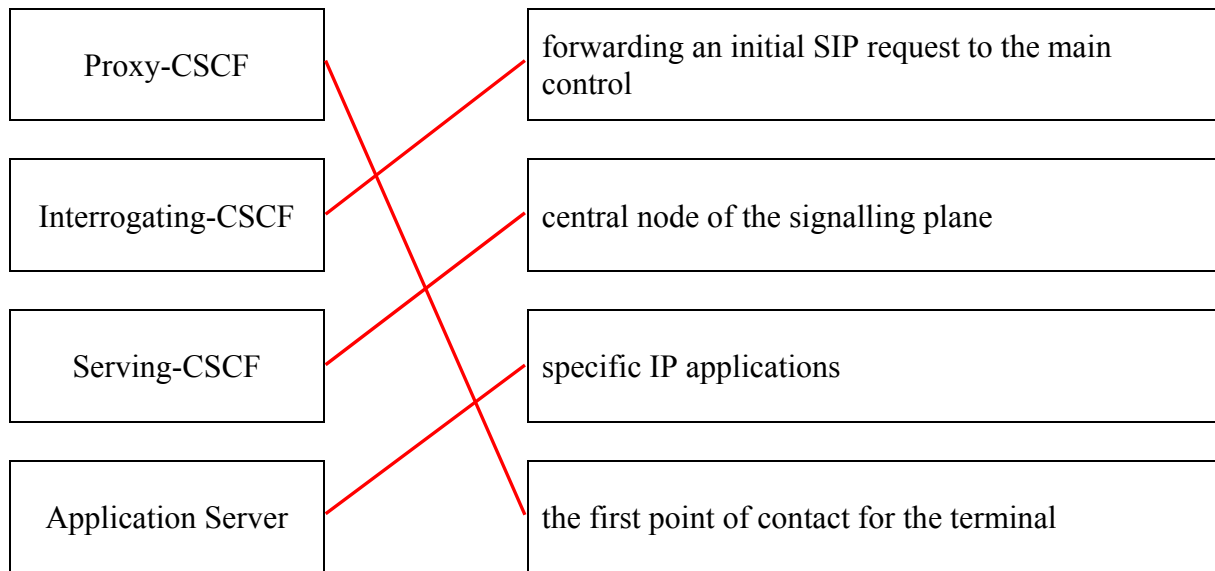
Each application running in UE has (~~same~~  
**different**) QoS requirements.

**2. Assign the individual technologies to the corresponding generations of mobile systems:**

eNodeB, GGSN, HSS, I-CSCF, MME, MSC, NodeB, P-CSCF, S-CSCF, SGSN, S-GW

|         |                               |
|---------|-------------------------------|
| IMS     | <b>P-CSCF, I-CSCF, S-CSCF</b> |
| 3G core | <b>MSC, GGSN, SGSN</b>        |
| UTRAN   | <b>NodeB</b>                  |
| EPC     | <b>HSS, MME, S-GW</b>         |
| E-UTRAN | <b>eNodeB</b>                 |



**3. Assign the terms from the left column to the corresponding properties on the right.****4. Mark the true statements.**

- X In 2G GSM no packet transport was possible.**
- X The circuit switching domain is composed of the MSC/VLR and Gateway MSC.**
- ☐ LTE is based only on CS services so voice communication is natively supported.
- X Evolved NodeB are part of Evolved UTRAN and can be interconnected via X2 interface.**
- ☐ Evolved NodeB includes database of users profiles.
- ☐ Serving Gateway is the concatenation of the HLR and the AuC.
- X LTE Advanced adds carrier aggregation and relaying to the LTE.**

