

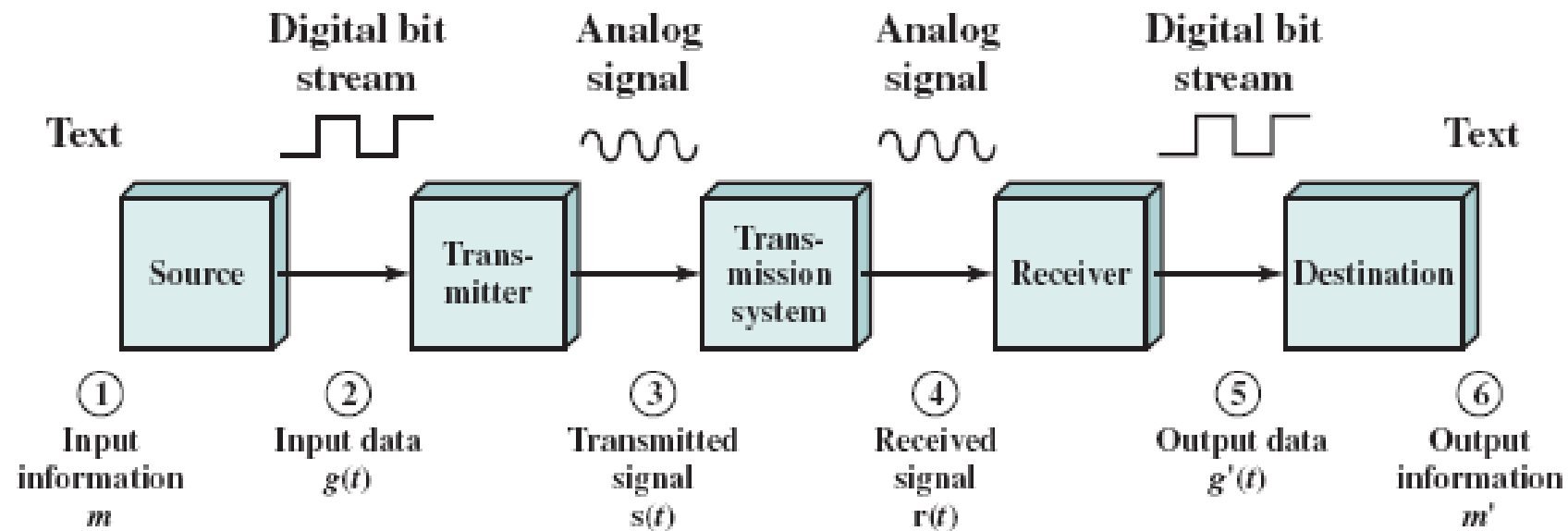
# IT221: Data Communications

QUIZ 1 ANSWERS

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# Quiz 1

1. Draw a figure to illustrate the Simplified Data Communication Model.



**Figure 1.4** Simplified Data Communications Model

## 2. Mention 4 tasks of The data communication.

Any four of the following

- Transmission system utilization
- Addressing
- Interfacing
- Routing
- Signal generation
- Recovery
- Synchronization
- Message formatting
- Exchange management
- Security
- Error detection and correction
- Network management
- Flow control

3. What are the most commonly used transmission media?

twisted-pair lines, coaxial cable, optical fiber cable, and terrestrial and satellite microwave.

4. Why we need to build protocols architecture in data communication?

There are lots of network applications.

Building each application from scratch is very time-consuming and challenging

5- Define encapsulation and PDU?

The process of addition control information to data is referred to as encapsulation.

the combination of data and control information is a protocol data unit (PDU).

6. Mention the 5 layers of TCP/IP?

Physical , Network or datalink , Internet, Transport and Application Layer

7. What is the abbreviation of (TCP, UDP, SMTP and FTP)

TCP => Transport Control Protocol

UDP => User Datagram Protocol

SMTP => Simple Mail Transfer Protocol

FTP => File Transfer Protocol

8. How many real IPv4 addresses approximately in The Internet? Mention two techniques to increase them?

around 4 billions

$255^4$

$255 * 255 * 255 * 255$

Increase using

IPv6

NAT => Network Address Translation