

DIGITAL SWITCHING TELECOMMUNICATION ASSESSMENT TEST

INSTRUCTION TO STUDENTS: ATTEMPT ALL QUESTIONS

1. What is the difference between system software and application software?

System Software is a set of programs that control and manage the operations of computer hardware. It also helps application programs to execute correctly. System Software are designed to control the operation and extend the processing functionalities of a computer system. System software makes the operation of a computer more fast, effective, and secure. Examples include: Operating systems such as windows, Linux, etc. **Application Software** is a program that does real work for the user but can only run after the system software has been installed and is running. It is mostly created to perform a specific task for a user. It is also known as an application package. This type of software is written using a high-level language like C, Java, etc. It is a user-specific and is designed to meet the requirements of the user. You can also install multiple Application Software on a single System Software. Example: Word-processing, Spreadsheet, Database, etc.

2. State FIVE factors associated with the production of switching software
 - i. Complexity and size of the software
 - ii. Long working life required
 - iii. Real time operation
 - iv. Stringent reliability and availability
 - v. Software portability

3. State FIVE advantages and FIVE disadvantages of Geostationary satellite.

Advantages

- i. No tracking is required by geostationary satellites.
- ii. Multiple access points are available in satellite communication.
- iii. 24-hour communication can be achieved with the help of satellites.
- iv. The signal quality of satellite communication is higher.
- v. To put more information on the carrier a broad band can be used.
- vi. Satellite communication is used for long distance communication or across oceans.
- vii. Low transmitting power and low receiver sensitivity is required by the satellite in close elliptical orbits.

Disadvantages

1. The transmitter and receiver used in satellite communication require high power, most sensitive transmitters and large diameter antennas.
2. Satellite communication is disturbed by solar activities and cyclones in the space.
3. Due to ageing effect, the efficiency of satellite components decreases.
4. The longer propagation times is one of a disadvantage of satellite communication.
5. The cost for initial design and launching of the satellite in the orbit is extremely high.