

Time : 1-15 Hours]

- પ્ર. 1 1) ડેટા કમ્યુનિકેશન વિભાવના સમજાવી અને વિવિધ પ્રકારના ડેટા કમ્યુનિકેશન 15
મીડિયાની ટૂંકમાં ચર્ચા કરો અને મલ્ટિપ્લેક્સિંગ ડેટા કમ્યુનિકેશનની વિગતવાર વર્ણન
કરો.
- 2) સોફ્ટવેર અને નેટવર્ક ઓપરેટીંગ સિસ્ટમ એટલે શું? વિવિધ પ્રકારના નેટવર્ક ઓપરેટીંગ
સિસ્ટમ જણાવી અને તેની લાક્ષણિકતો વિશે ટૂંકમાં વર્ણન કરો.

અથવા

- (A) ડેટા કમ્યુનિકેશન એપ્લિકેશન એટલે શું? ઇન્ફોર્મેશન ટ્રાન્સમિશન અને મલ્ટીમીડિયા ડેટા
કમ્યુનિકેશન એપ્લિકેશન વિશે વિગતે સમજાવો.
- (B) નેટવર્ક ટોપોલોજી એટલે શું? વિવિધ નેટવર્ક ટોપોલોજી જણાવી, તેના ફાયદા અને ગેરફાયદા
વિશે વિસ્તૃતમાં ઉદાહરણો આપી સમજાવો.
- પ્ર. 2 નીચેના પૈકી કોઈપણ બે વિષે ટૂંકનોંધ લખો. 10
- (A) વાયર અને વાયરલેસ ટ્રાન્સમિશન કોમ્યુનિકેશન ચેનલ વિશે સમજાવો.
- (B) પ્રોટોકોલ એટલે શું? TCP/IP વિશે વિગતે વર્ણન કરો.
- (C) ઇન્ટરનેટ સિક્યુરીટી અને પ્રાઇવસી વિશે સમજાવો.
- પ્ર. 3 અંગ્રેજી વર્ઝન પ્રમાણે. According to the English version Multiple Choice Questions 10

English Version

- Q. 1 1) Explain the concept of data communication and briefly discuss the different types of 15
data communication media and describe in detail multiplexing data communication.
- 2) What is software and network operating system? State the different types of
network operating systems and briefly describe their characteristics.
- OR
- (A) What is data communication application? Explain in detail about information
transmission and multimedia data communication application.
- (B) What is network topology? Explain various network topologies, their advantages
and disadvantages with detailed examples.
- Q. 2 Write Short Notes (Any Two) 10
- (A) Explain about wired and wireless transmission communication channels.
- (B) What is a protocol? Describe TCP/IP in detail.
- (C) Explain about Internet security and privacy.

P.T.O.

Q. 3 Select and write the correct answer from following multiple choice questions 10

1. What is called communication channel?

(a) Medium of information	(b) The medium that relates the sender and user
(c) The medium that establishes the contact between the sender and receiver of information	(d) The medium that relates the sender and user
2. Which of the following is not the possible ways of data exchange?

(a) Simplex	(b) Half-duplex
(c) Full-duplex	(d) Multiplex
3. Asynchronous communication is when the sender and recipient:

(a) Are online at the same time	(b) Do not have to be online at the same time
(c) Do not use the same operating system	(d) Use different software but are able to communicate through the Internet.
4. What is the Ring Network structure?

(a) Many computers are connected	(b) Many computers are connected with a cable
(c) Many computers are connected differently	(d) Many computers are connected in a closed loop with a cable
5. The area of coverage of a satellite radio beam is called its....

(a) Beam width	(b) Circular polarization
(c) Footprint	(d) Identity
6. What is the main difference between synchronous and asynchronous transmission?

(a) Band width required is different.	(b) Pulse height is different.
(c) Clocking is derived from the data in synchronous transmission.	(d) Clocking is mixed with data in asynchronous transmission.
7. Controlling access to a network by analysing the incoming and outgoing packets is called

(a) Data Filtering	(b) IP Filtering
(c) Packet Filtering	(d) Firewall Filtering
8. Wireless telegraphy was invented by whom, in the end of 19th century?

(a) Marconio	(b) Remington
(c) James watt	(d) Adam Brown
9. In 1876, a simple telephone model to send voice in the form of the electrical signal from one place to another was made by

(a) Alexander Graham	(b) Charles Babbage
(c) John Logie	(d) Michael Faraday
10. As compared to radio waves or microwaves, the rate of sending information with light beams is

(a) Equal	(b) Larger
(c) Smaller	(d) Zero