



KERALA STATE RUTRONIX
Data Communication & Computer Networks
(PGDCA)

Question code

F6

Time : 2 hours

Maximum Marks : 100

Note: Write the answers for Questions from 1 to 30 in the MCQ answer sheet

Part - I Choose the most appropriate answer

(10 x 1 Mark = 10 Marks)

- 1) Which topology requires a central controller or hub?
a) Ring b) Star c) Mesh d) Bus
- 2) Which of the following identifies the specific webpage and its computer on the web?
a) Website b) Web address c) URL d) Domain name
- 3) Which of the following is not a networking device?
a) Repeater b) Switch c) Bridge d) LAN
- 4) The extension of **.com**, **.edu**, **.org**, **.net** etc are usually called
a) Network b) IP Address c) Domain Name d) Mail ID
- 5) Which of the following standard protocol for sending emails across the internet?
a) HTTP b) FTP c) IMAP d) SMTP
- 6) The third layer in OSI model is
a) Physical b) Data link c) Transport d) Network
- 7) A communication device that combines transmission from several input output devices into one line is a
a) concentrator b) demultiplexer c) multiplexer d) full duplex line
- 8) IPV6 addresses have a size of
a) 16-bits b) 32-bits c) 64-bits d) 128-bits
- 9)is the maximum capacity of fiber optic cable.
a) 10 Mbps b) 100 Mbps c) 1000 Mbps d) 10000 Mbps
- 10) ASK, PSK and FSK are examples of conversion.
a) digital-to-digital b) digital-to-analog c) analog-to-analog d) analog-to-digital

Part - II Fill in the blanks

(10 x 1 Mark = 10 Marks)

- 11) Police wireless system is an example for transmission.
- 12) is a peripheral card attached to a PC to help it connect to a network.
- 13) A loss of signal energy such as power or signal strength is referred to as
- 14) The two parts of IP address are and
- 15) A private network inside a company or organization called
- 16) Unwanted bulk messaging into email inbox is known as
- 17) The standard connector for unshielded twisted pair cabling is
- 18) is a hardware device used to connect several computers together.
- 19) is an example of immutable fields of Internet Header Length and Source Address.

20) The first step of pulse code modulation is

Part - III State whether True or False

(10 x 1 Mark = 10 Marks)

- 21) A fiber-optic cable can conduct R F Signal.
- 22) In a peer-to-peer network, all data and software are stored on a centralized server.
- 23) A modem is capable of only modulation.
- 24) Telnet protocol is used to connect a local computer with a remote computer.
- 25) If a host moves from one network to another, its IP address also changes.
- 26) Coaxial cable can be used for cable TV network.
- 27) Router is a device for refreshing a signal between two network nodes.
- 28) A metropolitan area is confined to a limited geographical area.
- 29) Radio waves are electromagnetic waves within the frequencies 30KHz - 300GHz.
- 30) Satellite communication uses microwaves.

Part - IV Expand the following

(10 x 1 Mark = 10 Marks)

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|----------|----------|
| 31) SMTP | 36) NCP |
| 32) UDP | 37) FTP |
| 33) ARP | 38) SAP |
| 34) RIP | 39) ISP |
| 35) CSMA | 40) DHCP |

Part - V Explain the following (Any Six)

(6 x 5 Marks = 30 Marks)

- 41) Multiplexing and types of Multiplexing.
- 42) Encoding and Decoding.
- 43) Types of Modulation.
- 44) Modes of communication.
- 45) Channel capacity.
- 46) Switching techniques.
- 47) Modes of Transmission.
- 48) Sub netting.

Part - VI Essay Questions (Any Three)

(3 x 10 Marks = 30 Marks)

- 49) Signal encoding techniques.
- 50) Network Topologies.
- 51) Explain OSI Model.
- 52) Different error detection methods.
- 53) IP addressing and IP address classes.