Comp, IT, GE
Subject : Computer Networks

Time : 3 Hrs.   M.M. : 100

SECTION-A

Note: Multiple choice questions. All questions are compulsory   (10x1=10)

Q.1   LAN stands for_____

a)   Local area network   b)   Less access network

c)   Less area network   d)   Local access network

Q.2   OSI model has_____layers.

a)   5   b)   6

c)   7   d)   8

Q.3   IP address 224.132.212.42 belongs to which class?

a)   Class A   b)   Class B

c)   Class D   d)   Class C

Q.4   In which topology, there is only one single path for transmission of data?

a)   Bus topology   b)   Ring Topology

c)   Star Topology   d)   Tree Topology

Q.5   ISDN stands for_____

a)   Integrated Services Digital Network

b)   Integrated Services Data Network

c)   Interface Services Digital Network

d)   Integrated Signal Digital Network

Q.6   The another name of CSMA/CD standard is_____

a)   IEEE 802.1   b)   IEEE 802.3

c)   IEEE 802.7   d)   IEEE 802.11

Q.7   In 10Base 5 standard, 10 represents the _____ of the Ethernet network.(Data rate)

a)   Cable length   b)   Cable type

c)   Data rate   d)   None of the above

Q.8   What is the size of UDP header in bytes?

a)   40   b)   20

c)   10   d)   8

Q.9   Which of the following is not a troubleshoot technique?

a)   Ping   b)   Netstat

c)   hacking   d)   Ipconfig

Q.10 Another name of 802.11 protocol is_____

a)   Bluetooth   b)   Wi-Fi

c)   Ethernet   d)   CDMA/CD

SECTION-B

Note: Objective type questions. All questions are compulsory. (10x1=10)

Q.11 Name the elements of computer network?

Q.12 What is significance of Shannon capacity in computer networks?

Q.13 What is logical addressing?

Q.14 What is the need of protocols?

Q.15 Define the term congestion? Why it is created?

Q.16 Define the term of "data integrity".

Q.17 Why we use traceroute command?

Q.18 What is RARP?

Q.19 Name the various types of cryptography?

Q.20 What do you understand by the term network management?

SECTION-C

Note: Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)

Q.21 Explain various elements of computer network.

Q.22 What is topology? What are its types?

Q.23 Discuss the functions of each layer of TCP/IP Model,

Q.24 What do you understand by transmission modes? Explain types of modes of transmission.

Q.25 Compare peer-to-peer and server client network model.

Q.26 Differentiate between LAN, MAN, WAN.

Q.27 Distinguish between Router and Bridge.

Q.28 Describe IP packet format of IPv4.

Q.29 Discuss the function of modem.

Q.30 What is IEEE standard 802.3? Explain its working principle.

Q.31 How FDM is different from TDM?

Q.32 What is a Wi-Fi? What are the advantages and disadvantages of Wi-Fi?

Q.33 Explain briefly about ethical hacking.

Q.34 Explain any two network troubleshooting techniques.

Q.35 Define encryption. Why it is necessary?

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. (2x10=20)

Q.36 Explain OSI reference model with diagram in detail.

Q.37 What do you understand by Raid management? Explain its types in detail.

Q.38 Write a short note on any two of the following:
   a) Hub   b) Ring Topology
   c) VOIP

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SECTION-A

Note: Objectives questions. All questions are compulsory   (10x1=10)

(Course Outcome/CO)

Q.1   Define Computer Network?   (CO-1)

Q.2   What is switching?   (CO-2)

Q.3   Define Protocol.   (CO-2)

Q.4   How many layers are in TC/IP reference model.
                                             (CO-2)

Q.5   Define ARC Net.   (CO-4)

Q.6   What is HUB?   (CO-5)

Q.7   Define NETSTAT.   (CO-6)

Q.8   OSI stands for _____.   (CO-2)

Q.9   Define a node on a network.   (CO-1)

Q.10   Define Saas.   (CO-8)

SECTION-B

Note: Very Short answer type questions. Attempt any ten parts   10x2=20

Q.11   What do you mean by network topology? (CO-1)

Q.12   Define LAN.   (CO-1)

Q.13   How many layers are there under TCP/IP
                                             (CO-2)

Q.14   Explain VSAT.   (CO-3)

Q.15   What do you mean by DSL.   (CO-3)

Q.16   Explain two trouble shooting tools.   (CO-7)

Q.17   What is NIC?   (CO-7)

Q.18   What are the function of physical in OSI reference model.   (CO-2)

Q.19   Write short notes on Bluetooth.   (CO-7)

Q.20 Explain P to P network. (CO-6)

Q.21 What is encryption? (CO-5)

Q.22 Name networking models. (CO-4)

SECTION-C

Note: Short answer type questions. Attempt any eight questions. 8x5=40

Q.23 Explain computation between Circuit & packed switching (CO-1)

Q.24 Explain ISDN & type of ISDN. (CO-2)

Q.25 Write short notes an:-

   a) Leased Lines   b) DSL   (CO-7)

Q.26 What is Multiplexing. Explain types of multiplexing. (CO-2)

Q.27 Explain Routers & Bridges. (CO-5)

Q.28 Explain cryptography & its techniques. (CO-7)

Q.29 Write short notes an:-

   a) Repeaters   b) Gateways   (CO-5)

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Q.30 Discuss IP addressing in details. (CO-2)

Q.31 Discuss the function of network and session layer i details. (CO-2)

Q.32 Explain type of communication. (CO-4)

SECTION-D

Note: Long answer type questions. Attempt any three questions. 3x10=30

Q.33 What is network topology? Discuss various network topologies. (CO-1)

Q.34 Explain OSI reference model in detail. (CO-2)

Q.35 Differentiate IPV4 & IPV6 (CO-3)

Q.36 Define cloud computing & discuss laas in details. (CO-8)

(**Note:** Course outcome/CO is for office use only)

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5th / Comp., I.T., G.E.

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SECTION-A

Note: Objective type questions. All questions are compulsory   (10x1=10)

Q.1   Define Super netting.

Q.2   PSTN stands for _____.

Q.3   Write down the full form of ISDN.

Q.4   Define server client network.

Q.5   Define network computing.

Q.6   Write the use of modem.

Q.7   Write the use of gateway.

Q.8   Define UTP.

Q.9   Define topology.

Q.10   Define RF link.

SECTION-B

Note: Very short answer type questions. Attempt any ten questions out of twelve questions. 10x2=20

Q.11   Name the various layers in TCP/IP model.

Q.12   Differentiate between physical and logical addressing.

Q.13   Define peer-to-peer network.

Q.14   Give the name of any two Bluetooth devices.

Q.15   Explain in brief DSL.

Q.16   What is the purpose of computer network.

Q.17   Why do we use repeaters in a network.

Q.18   Define congestion.

Q.19   Differentiate between supernetting and subnetting.

Q.20   Write the name of the class of the following address : 14.21.120.8

Q.21   Write the main function of the physical layer.

Q.22 Write down any two disadvantages of leased line.

SECTION-C

Note: Short answer type questions. Attempt any eight questions out of ten questions. 8x5=40

Q.23 Explain different classes of IP addresses.

Q.24 What is domain name service. Explain.

Q.25 Differentiate between IPv4 and IPv6.

Q.26 Explain in brief any two network trouble shooting tools.

Q.27 Differentiate between HUB and switch.

Q.28 Define Bluetooth. Write its various applications.

Q.29 Explain in brief the various standards of Ethernet.

Q.30 Write short note on multiplexers.

Q.31 Write down the various functions of data link layer.

Q.32 Write down the various functions of transport layer.

SECTION-D

Note: Long answer type questions. Attempt any three questions out of four questions. 3x10=30

Q.33 Discuss in detail the functions of layers in OSI model.

Q.34 Discuss Network switching techniques in detail.

Q.35 Write short notes on :

a) PSTN

b) VSAT

c) ISDN

Q.36 Write short note on the following : -

a) Gateways

b) IEEE802.11

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SECTION-A

Note: Very Short Answer type questions. Attempt any 15 parts.   (15x2=30)

Q.1 a) Why we need computer networks?

b) What is server?

c) Differentiate between hub and switch.

d) What is packet switching?

e) Define server client network.

f) Define token ring.

g) What is FTP?

h) What is full form of IEEE?

i) Define subnet mask.

j) What function data link layer serve?

k) What is IPCONFIG?

l) Define Multiplexer.

m) What is the role of modem?

n) Define leased liner.

o) Define peer to peer network.

p) Class D addresses are used for which purpose?

q) What is unicast address?

r) What is an adhoc network. Give one example of adhoc network.

SECTION-B

Note: Short answer type questions. Attempt any ten parts   10x4=40

Q.2 i) What are advantages of IPV6 over IPV4?

ii) Why rooting is important in networking?

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iii) Explain about distance vector rooting algorithm.

iv) What is the function of physical layer?

v) What is bridge? Explain.

vi) What is remote procedure call?

vii) Write short note on :

   a) NIC   b) SMTP

viii) What is data encryption? Explain in brief.

ix) What is super netting? Explain in brief.

x) Explain about loop back testing?

xi) What are advantages and disadvantages of leased line?

xii) Explain the term rooter and repeater.

xiii) What are various network trouble shooting tools. Explain in brief.

xiv) What is Domain Name Service? Explain.

xv) What is the need of protocols?

SECTION-C

Note: Long answer type questions. Attempt any three questions.   3x10=30

Q.3   Explain about LAN, MAN and WAN in detail. Also enlist their respective advantages & limitation.

Q.4   Explain about OSI model giving in detail.

Q.5   Write short note on the following:

   a)   Gateways

   b)   IEEE802.11

Q.6   Write short note on the following.

   a)   VSAT

   b)   ISDN

Q.7   What is client server model? Write advantages and disadvantages of client server model.

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SECTION-A

Note: Very Short Answer type questions. Attempt any 15 parts.   (15x2=30)

Q.1 a) Write down the full form of OSI.

b) Write down the function of session and presentation layer in OSI Model.

c) Define network.

d) What is multiplexing?

e) Hubs are used in _____ topology.

f) Write one difference between sub netting and super netting.

g) What is the use of network connectivity devices?

h) What are the advantages of optical media connectivity.

i) Masking is used in subnetting (T/F)

j) What is data encryption?

k) Define flow control.

l) Define multi casting.

m) What is a protocol?

n) Define IP address.

o) The following IP addresses belongs to which address class :-

(a) 127.0.0.0

(b) 192.88.99.0

p) What is RF?

q) Write down the speed of Traditional ethernet

r) Write down the full form of PSTN.

SECTION-B

Note: Short answer type questions. Attempt any ten parts   10x4=40

Q.2 i) What is peer to peer network?

ii)   What is server client network?

iii) Write a short note on network services.

iv)   Differentiate between physical and logical addressing.

v)   Differentiate between classful addressing and classless addressing.

vi)   Write a short note on fast ethernet and Giga bit ethernet.

vii) What are the functions of NICS?

viii) What are the functions of Multiplexers?

ix)   Write a short note on wiresharp and traceroot trouble shooting tools.

x)   Briefly discuss the architecture of Bluetooth

xi)   Explain trouble shooting process.

xii) Discuss the classes of IP addressing.

xiii) Discuss the loop back concept.

xiv) What is network address Translation.

xv)   Discuss IPV6 packet format.

SECTION-C

Note: Long answer type questions. Attempt any three questions.   3x10=30

Q.3   Explain the various types of switching techniques in detail.

Q.4   Discuss the functions of various layers in OSI Reference Model.

Q.5   Discuss the functions of the following :-

(a) Repeaters

(b) Switches

(c) Modems

(d) Routers

Q.6   Explain the architectures of IEEE 802.11 in detail.

Q.7   Write short note on following Trouble shooting tools:-

(a) PING

(b) IPCONFIG

(c) IFCONFIG

(d) NETSTAT.