SB-161

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Seat No.	

S.Y.B.Tech. (Computer Science and Engineering) (Part-II)
(Semester - III) (CBCS) Examination, January - 2023
COMPUTER NETWORKS-I
Sub. Code : 73279

Day and Date : Saturday, 28 - 01 - 2023 **Total Marks :70**

Time :10.30 a.m. to 1.00 p.m.

Instructions :
1) **All questions are compulsory.**
2) **Assume suitable data wherever necessary.**
3) **Figures to the right indicate full marks.**

Q1) Solve MCQs. (1 Marks each) **[14]**

a) Virtual terminal protocol is an example of the

i) Application layer ii) Presentation layer

iii) Transportation layer iv) None of tha bove

b) A device operation at the physical layer is called a

i) Bridge ii) Router

iii) Repeater iv) None of the above

c) The Media Access Control Sublayer resides in which OSI layer?

i) Transport ii) Network

iii) Physical iv) Data Link

d) Header of a frame generally contains_____

i) Synchronization bytes ii) Addresses

iii) Frame identifier iv) All of the mentioned

P.T.O.

e) CRC stands for_____.

i) Cyclic redundancy check ii) Code repeat check

iii) Code redundancy check iv) Cyclic repeat check

f) In Go back N if frames 4,5 and 6 are received successfully, the receiver may send an acknowlegement_____ to the sender.

i) 5 ii) 6

iii) 7 iv) Any of the above

g) In the_____ method, a special packet called a _____ circulates thought the ring.

i) Reservation : control frame ii) Polling : Poll request

iii) Token passing: token iv) None of the above

h) In the _____ method, after the station finds the line idle it sends or refrain from sending based on the outcome of a random number generator. If the line is busy, it tries again.

i) Nonpersisten ii) I-persisten

iii) P-persistent iv) None of the above

i) In classless addressing, the prefix length defines the _____

i) netid ii) hostid

iii) mask iv) none of the above

j) In IPv4 class_____ has the greatest number of addresses in each block

i) A ii) B

iii) C iv) D

k) Header size of the ICMP message is _____

i) 8-bytes iii) 8-bits

iii) 16-bytes iv) 16-bits

l) IGMP is _____ protocol.

i) An error reporting ii) A group management

iii) A transmission iv) None of the above

m) Return value of the UDP port " changen" is _____.

i) String of characters

ii) String of integers

iii) Array of characters with integers

iv) Array of zero's and one's

n) Beyond IP, UDP provides additional services such as _____

i) Routing and switching.

ii) Sending and receiving of packets

iii) Multiplexing and demultiplexing

iv) Demultiplexing and error checking

Q2) Solve any 2 of the following. (7 marks each) **[14]**

a) Outline TCP/ IP reference model and explain the each layer in detail.

b) Draw the Binary Encoding, Marchester encoding, Differential Manchester encoding for given data-101100010.

c) Explain the Dynamic channel allocation and List the different Multiple Access protocols.

Q3) Solve any 2 of the following (7 marks each.) **[14]**

a) List the different networking devices and explain any 2 with suitable example.

b) What is framing? What is need of framing. List the different framing method.

c) Explain IEEE 802.3.

Q4) Solve any 2 of the following (7 marks each). **[14]**

a) Illustrate the working of shortest path Routing.

b) Draw and explain IP datagram format.

c) Explain UDP services in detail.

Q5) Solve any 2 of the following (7 marks each). **[14]**

a) Explain and illustrates the working of Token Bucket Algorithm.

b) Explain Error reporting messages in ICMPv6

c) Write in brief on TCP timers.