Vidya Vikas Mandal's
Shree Damodar College of Commerce & Economics, Margao-Goa
SY BCA Semester-IV Semester End Examination, June 2022
Data Communications (CAC-114)

Duration: 2 Hours   Max Marks: 60

Instructions: *i) All Questions are compulsory*
ii) Figures to the right indicate full marks

Q. 1 A) State TRUE or FALSE (5x1=05)

i) TCP is a connection-oriented reliable service, which means that it guarantees the delivery of data packets.
ii) Standard that have been approved by organized body but have not been adopted widely are known as de facto standards.
iii) Digital signals can have an infinite number of values in a range; Analog signals can have only a limited number of values.
iv) In classful addressing, class D is Broadcast in which a datagram is directed to multiple hosts
v) Registered Ports (Numbers 1024 to 49151) - These port numbers are assigned to user processes or applications

Q.1 (B) Define the purpose of the following in not more than 20 words. (5x1=05)

i) Wide area network(WAN)
ii) Multipoint connection.
iii) Piconet in Bluetooth.
iv) Subnetting.
v) Port addressing

Q.2 Answer the following:

(a) Explain the use of concatenated virtual circuits. (2)
(b) Describe the function of port addressing in transport layer protocol. (3)
(c) Explain the working of Ring topology with a diagram. (5)

Q.3. Answer the following:

(a) Explain loopback address in network layer. (2)
(b) Describe the working of DHCP and DNS protocols (3)
(c) Point out the various header fields in a TCP segment along with a diagram (5)

Q.4. Answer the following:

(a) Explain in brief the two categories of standards. (2)
(b) Explain any three responsibilities of Data link layer in OSI model. (3)
(c) List and explain the various header fields in an IPv4 packet along with a help of neat diagram. (5)

Q.5. Answer the following:

(a)Explain the working for flow control in transport layer   (2)

(b)Apply conversion tools on the following IP address   .   (3)

i) Convert from binary to dotted decimal notation	11000001 100000011 00011011 11111111
ii) Convert from dotted decimal to binary	221.34.7.82

(c) Illustrate with diagrams the various wireless propagations encountered in modern day communication.

Q.6. Answer the following.

(a)Explain UDP in brief   (2)

(b)Differentiate between optical fibre and twisted pair communication medium.   (3)

(c)Illustrate any 3 layers of the TCP/IP model with a diagram.   (5)

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