

Vidya Vikas Mandal's
Shree Damodar College of Commerce & Economics, Margao-Goa
S.Y. B. C. A., Semester IV, End Semester Examination, April 2019
COMPUTER NETWORKS (BCA 402)

Duration: 02 Hours

Total Marks: 50

Instructions: 1) All questions are compulsory
2) Figures to the right indicate Full Marks
3) Start each new question on fresh page
4) Total number of printed pages is two.

Q.1. Answer the following

10 Marks

A) Define the following terms

5 x 1 = 5

- i) Transit time
- ii) Redundant bits
- iii) This-host address
- iv) Piggybacking
- v) Socket Address

B) Answer the following in one or two statements.

5 x 1 = 5

- i. Hub networking device works at which layer of OSI Model?
- ii. Which layer of TCP/IP model adds header as well trailer to the data before forwarding it to the next layer?
- iii. IEEE 802.11 is a standard Protocol for which form of network?
- iv. Mention any 2 functions of Application layer of TCP/IP Model.
- v. What is the port number assigned to SMTP and FTP Services?

Q.2 Answer the following

10 Marks

- A) Mention any two limitations of Repeater networking device. 02
- B) Give three points of difference between Fiber Optics and Satellite transmission media. 03
- C) What do you mean by line encoding? Use Manchester and Differential Manchester encoding to represent the signal for the data bit 011101011. 05

Q.3 Answer the following	10 Marks
A) Mention any four functionalities of Data Link Layer.	02
B) Define burst error. Find the keyword for the dataword 1001 using generator polynomial $x^3 + x + 1$ using CRC encoding.	03
C) Explain the working of Stop-and-Wait ARQ Protocol of Data Link Layer using flow diagram.	05
Q.4 Answer the following	10 Marks
A) Mention any 4 functions of Network layer.	02
B) Explain the functionality of RARP in Network layer.	03
C) A block of addresses is granted to a small organization. We know that one of the addresses is 205.16.37.39/28. Find	05
i) The first address in the block.	
ii) The last address for the block.	
iii) The number of addresses.	
iv) The network and host address of above given address.	
v) The address mask and the class.	
Q.5. Answer the following	10 Marks
A) Mention the layer of TCP/IP Model which is associated with	02
i) Physical address	
ii) Logical address	
iii) Port address	
iv) Specific address	
B) Explain connection establishment phase of TCP connection using three-way handshaking.	03
C) Explain SMTP and FTP protocols of Application layer of TCP/IP Model.	05

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