



WALCHAND COLLEGE OF ENGINEERING
(Government Aided Autonomous Institute)
Vishrambag, Sangli - 416415
Second Year B.Tech. Computer Science and Engineering
Re-Exam, EVEN SEMESTER, AY 2022-23
Computer Network (6CS224)



Re-Exam

PRN: _____

Day & Date: Saturday, 09/09/2023

Time : 2.00 pm to 5.00 pm

Max Marks: **100**

IMP: Verify that you have received question papers with correct course code, branch etc.

Instructions

- All questions are compulsory.
- Writing question number on answer book is compulsory otherwise answers may not be assessed.
- Assume suitable data wherever necessary.
- Figures to the right of question text indicate full marks.
- Mobile phones, smart gadgets and programmable calculators are strictly prohibited.
- Except PRN anything else writing on question paper is not allowed.
- Exchange/Sharing of stationery, calculator etc. not allowed.
- Show all the steps to the solution of numerical.**

Text on the right of marks indicates course outcomes (Only for faculty use)

- | | Marks | |
|--|-------|-----|
| Q1 A) Define topology. Explain Star and Ring topology in detail by drawing suitable diagrams. You have two computer connected by an Ethernet HUB. Is this LAN, MAN or a WAN? Explain your reason. | 8 | CO1 |
| B) Draw OSI model and write down responsibilities of each layer. | 8 | CO1 |
| C) Consider two station A and B are communicating using CSMA/CD protocol. Draw a flow chart and explain in detail how this communication will take place? | 8 | CO2 |
| D) Explain in detail what is an exposed station and hidden station problem in communication? Draw suitable diagrams. | 5 | |
| E) Brief about following techniques. Draw suitable diagrams.
1. 1-persistent
2. Non persistent
3. P-persistent | 6 | CO3 |
| Q2 A) Change the following IPv4 address from binary notation to dotted decimal notation.
i) 10000001 00001011 00001011 11101111
ii) 11000001 10000011 00011011 11111111
iii) 11110000 10101000 00010101 10100111
iv) 01000100 10111110 11111100 10101111 | 8 | CO2 |
| B) What is Class full addressing? Explain all classes with example of each.
A block of addresses is granted to a small organization. We know that one of the addresses is 205.16.37.39/28. What is the first address, last address and number of addresses in the block? | 8 | CO2 |
| C) Explain various strategies of transition from IPv4 to IPv6. | 6 | CO2 |

D) Differentiate between the Transmission control protocol and user datagram protocol.

5

CO2

E) Draw and explain the header format of TCP.

6

CO1

Q3 A) With the help of proper diagram and example, explain the connection termination process in TCP. Also, explain what is half-close in TCP connection termination?

6

CO1

B) Write detail note on all open loop congestion control and closed loop congestion control techniques with the help of proper diagrams.

8

CO3

C) Write short note on:

6

CO1

- Priority Queuing
- FIFO queuing

D) In the context of DNS, explain how recursive resolution is different from iterative resolution? Draw suitable diagrams to support your answer.

6

CO3

E) Describe the architecture & services of Electronic mail.

6

CO2

.....End of question paper.....