SHRIMATHI DEVKUNVAR NANALAL BHATT VAISHNAV COLLEGE FOR WOMEN
(AUTONOMOUS)
(Affiliated to the University of Madras and Re-accredited with 'A+' Grade by NAAC)
Chromepet, Chennai - 600 044.
B.C.A - END SEMESTER EXAMINATIONS - NOV'2024
SEMESTER - IV
20UCACT4007 - Data Communication and Networking

Total Duration : 2 Hrs.30 Mins.   Total Marks : 60

Section B

Answer any **SIX** questions $(6 \times 5 = 30$ Marks$)$

1. What is network topology? Explain any two types of network topologies

2. Differentiate between parallel and serial transmission.

3. Describe the function of the Network layer and Transport layer in the OSI model.

4. What are the differences between guided and unguided transmission media? Provide examples.

5. Explain the concept of error detection. How does the checksum method work?

6. What is Frequency Division Multiplexing (FDM)? How is it different from Time Division Multiplexing (TDM)?

7. Briefly explain the role of digital signatures in ensuring data security.

8. What are the differences between routers and switches in a network?

Section C

Answer any **THREE** questions $(3 \times 10 = 30$ Marks$)$

9. Explain the OSI model in detail, describing the function of each layer.

10. Describe the different types of multiplexing techniques and their applications.

11. Discuss on data communication.

12. Explain the difference between Distance Vector Routing and Link State Routing algorithms.

13. Describe the types of errors that can occur in data transmission and the methods used for error detection and correction

*****