

(FOR THE CANDIDATES ADMITTED

24UAI4A1

DURING THE ACADEMIC YEAR 2024 ONLY)

REG.NO. :

N.G.M.COLLEGE (AUTONOMOUS) : POLLACHI

END-OF-SEMESTER EXAMINATIONS : MAY 2026

BSc.CS WITH AI & ML
SEMESTER IV

MAXIMUM MARKS: 75
TIME : 3 HOURS

PART - III

24UAI4A1 - FUNDAMENTALS OF COMPUTER NETWORKS

SECTION – A

(10 X 1 = 10 MARKS)
(K1)

ANSWER THE FOLLOWING QUESTIONS.

1. How many layers are there in the ISO OSI reference model?
a) 7 b) 5 c) 4 d) 6
2. What was the name of the first network?
a) ASAPNET b) ARPANET c) CNNET d) NSFNET
3. IPv4 Address is _____
a) 8 bit b) 16 bit c) 32 bit d) 64 bit
4. Delimiting and synchronization of data exchange is provided by _____
a) Application layer b) Session layer c) Transport layer d) Link layer
5. Which is not a application layer protocol?
a) HTTP b) SMTP c) FTP d) TCP

ANSWER THE FOLLOWING IN ONE (OR) TWO SENTENCES

(K2)

6. Define Computer Networks.
7. Expand CRC.
8. What is routing?
9. What is a Synchronization Point in the Session Layer?
10. What are the responsibilities of Application Layer?

SECTION – B

(5 X 5 = 25 MARKS)

ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS. (K3)

11. a)Discuss Network Hardware
(OR)
b)Compare OSI and TCP/IP Protocol Suite
12. a)Describe Electromagenetic spectrum and Ration Transmission.
(OR)
b)Explicate Elementary Data-link Protocol.

(CONT...2)

13. a) Explain the routing algorithms
(OR)
b) Illustrate Elements of Transport Protocols
14. a) Discuss the different types of dialog control handled by the Session Layer. with examples.
(OR)
b) Elucidate the functions of the Presentation Layer in the OSI model. How does it act as a translator between heterogeneous systems?
15. a) Explicate Application layer Functionality and its protocols.
(OR)
b) Discuss Digital Signatures

SECTION – C**(5 X 8 = 40 MARKS)****ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS. (K4 (Or) K5)**

16. a) Elucidate the Protocol Hierarchies.
(OR)
b) Articulate about TCP/IP Protocol Suite
17. a) Explain Guided Transmission Media
(OR)
b) Describe Communication Satellite in detail
18. a) Illustrate Congestion Control Algorithm in detail
(OR)
b) Write a detail note on IPv4 Addresses and IPv6 Addresses
19. a) Describe how the Session Layer manages Session Establishment, Maintenance, and Termination. Illustrate the process with a flow diagram.
(OR)
b) Explain the process of encryption and decryption in the Presentation Layer.
20. a) Give an explanation about E-mail Architecture.
(OR)
b) What is cryptography? Explain the two categories of encryption methods.
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