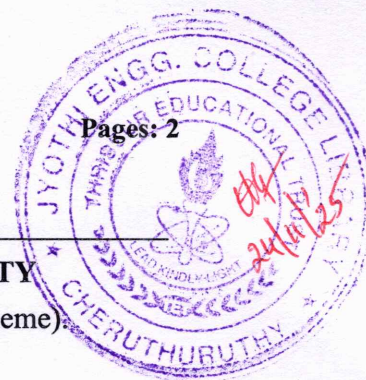Reg No.:_____   Name:_____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

B.Tech Degree S3 (R) Examination November 2025 (2024 Scheme)

Course Code: PBCCT304

Course Name: BASIC CONCEPTS IN COMPUTER NETWORKS

Max. Marks: 40   Duration: 2 hours 30 minutes

PART A

(Answer all questions. Each question carries 2 marks)

		CO	Marks
1	What do you meant by Services and Interfaces?	1	(2)
2	What are the key metrics for evaluating network performance?	1	(2)
3	Which access method is used in IEEE 802.3 Ethernet networks?	2	(2)
4	List two uses of coaxial cables in computer networks.	2	(2)
5	What is the purpose of Network Address Translation (NAT)?	3	(2)
6	Define VPN and mention one type.	3	(2)
7	What is DNS? Explain its primary function.	4	(2)
8	Define peer-to-peer (P2P) file sharing.	4	(2)

PART B

(Answer any one full question from each module, each question carries 6 marks)

Module -1

9	a)	Explain ISO-OSI Reference model with an appropriate diagram	1	6
10	a)	Identify the service primitives used in client-server communication and describe the steps involved in the process.	1	6

Module -2

11	a)	Explain the working of Stop-and-Wait ARQ, Go-Back-N ARQ, and Selective Repeat ARQ with diagrams	2	6
12	a)	With a diagram, explain the structure of a HDLC frame and list the function of each field.	2	6

Module -3

13	a)	Differentiate between virtual circuit and datagram networks.	3	4
	b)	Define a router and mention its primary purpose.	3	2
14	a)	Explain the working of distance vector routing protocol.	3	6

Module -4

15	a)	Draw and explain the UDP header format	4	4
	b)	What is the difference between TCP and UDP?	4	2
16	a)	Explain the working of HTTP and HTTPS, and write down the importance of using HTTPS.	4	6

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