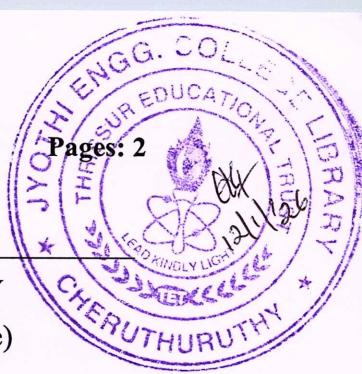Reg No.:_____   Name:_____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
B.Tech Degree S2 (S) Examination January 2026 (2024 Scheme)

Course Code: GXEST203
Course Name: FOUNDATIONS OF COMPUTING: FROM HARDWARE ESSENTIALS TO WEB DESIGN

Max. Marks: 60   Duration: 2 hours 30 minutes

PART A
(Answer all questions. Each question carries 3 marks)

		CO	Marks
1	Differentiate between RAM and ROM.	CO1	(3)
2	List and describe three common input peripherals and their primary functions in a computer system.	CO1	(3)
3	Perform the following a) 249.40 to binary. b) 110110.01 to decimal. c) Subtract 110 from 11001.	CO2	(3)
4	Explain the role of the program counter (PC) and instruction register (IR) in instruction execution.	CO2	(3)
5	List five basic Linux commands along with examples.	CO3	(3)
6	What is DHCP? Explain its basic functionality.	CO3	(3)
7	What is HTML, and what is its primary purpose in web design?	CO4	(3)
8	What is CSS?	CO4	(3)

PART B
(Answer any one full question from each module, each question carries 9 marks)

Module -1

9	a)	Explain the different methods of I/O communication.	CO1	(5)
	b)	Explain the characteristics of SSD with a block diagram.	CO1	(4)
10	a)	Explain about the main components on a motherboard.	CO1	(5)
	b)	Describe device management in an operating system and explain its key responsibilities.	CO1	(4)

Module -2

11	a)	Explain the different number systems used in digital computers.	CO2	(5)

	b)	Explain assembly language and the role of assembler.	CO2	(4)
12	a)	Describe the main components of CPU with a block diagram.	CO2	(5)
	b)	Explain different instruction types with example.	CO2	(4)

Module -3

13	a)	Explain the topology that can be used in critical networks where uptime and fault tolerance are crucial.	CO3	(5)
	b)	Explain the structure of an IPv4 address with examples.	CO3	(4)
14	a)	Consider a university with multiple campuses across a city. Explain the possible types of networking technologies involved in enabling seamless data exchange, centralized resource access, and secure communications between campuses.	CO3	(5)
	b)	Explain the concept of a Client-Server network and provide a real-world example.	CO3	(4)

Module -4

15	a)	Discuss the differences between HTML and XHTML. What are the advantages and disadvantages of each?	CO4	(5)
	b)	Write a simple HTML code to display a heading and a paragraph.	CO4	(4)
16	a)	A university website needs to display a dynamic countdown timer for an upcoming event. Explain how JavaScript can be used to achieve this, with a sample script.	CO4	(5)
	b)	Illustrate the different ways in which style sheets can be applied to a web page with simple examples.	CO4	(4)

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