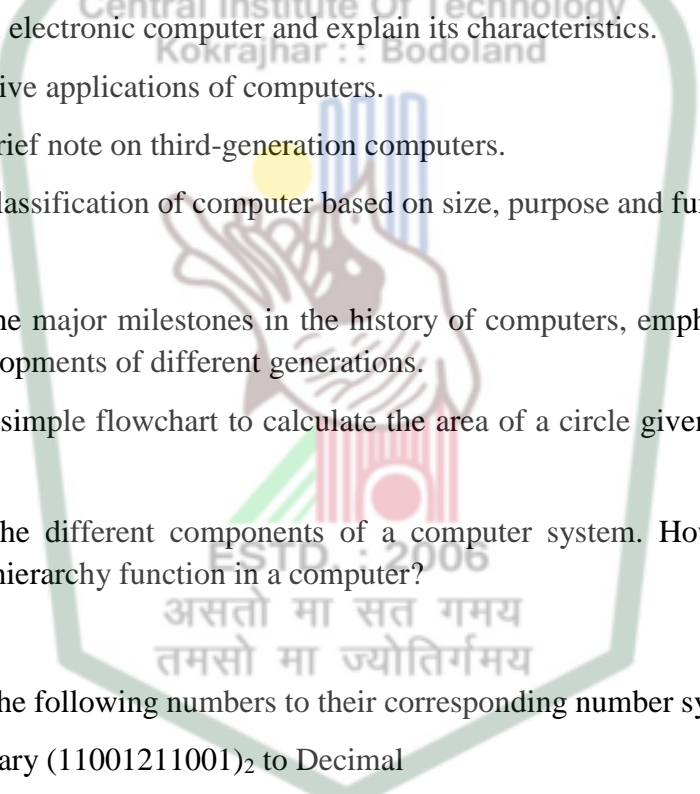**2024**

COMPUTER FUNDAMENTALS AND OPERATION

Full Marks: 100

Time: Three hours

The figures in the margin indicate full marks for the questions.

*Answer **any five** questions.*

1.	a)	Define an electronic computer and explain its characteristics.	5
	b)	List any five applications of computers.	5
	c)	Write a brief note on third-generation computers.	5
	d)	List the classification of computer based on size, purpose and functionality.	5
2.	a)	Outline the major milestones in the history of computers, emphasizing the key developments of different generations.	6
	b)	Design a simple flowchart to calculate the area of a circle given the radius as input.	4
	c)	Explain the different components of a computer system. How does the memory hierarchy function in a computer?	6+4
3.	a)	Convert the following numbers to their corresponding number system:	
		i) Binary $(11001211001)_2$ to Decimal	4
		ii) Decimal $(12510125)_{10}$ to Binary	4
	b)	Describe the types of software and their functions. Explain the role of operating system.	6+6
4.	a)	Describe the basic concepts of networking and explain the roles of network devices such as switch, hub, and modem	4+6
	b)	What is network topology? With the help of diagrams, describe any two types of topologies in detail and discuss their advantages and	2+8

disadvantages.

5. a) What is RAM? Explain about the different types of RAM.   4+6

   b) Discuss the benefits of e-commerce in today's world. What are some challenges associated with its implementation?   6+4

6. a) Explain the basic structure of an HTML document with the following content: 4x2=8

   i) Title: "Fundamentals of Computer"

   ii) Heading: "Welcome to Computer Basics"

   iii) Sub-heading: "Understanding Computers"

   iv) A paragraph "explaining the components of a computer system"

   b) Write a brief history of the World Wide Web? Explain about the role of web browsers and search engines.   6+6

7. a) Explain the following :

   i) The impact of the Internet on education and business.   10

   ii) Generation of programming languages.   10