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Document No.: CFM – 8



SARDAR VALLABHBHAI PATEL EDUCATION SOCIETY
MANAGED

N. G. PATEL POLYTECHNIC

INFORMATION TECHNOLOGY

FORMAT FOR ASSIGNMENTS

Course Name (With Code): Introduction to IT System(DI01016021)

Semester / Year: Fifth/Third

Assignment Number: 1

Assignment CO Number: DI01016021

Sr. No.	Questions related to Course Outcomes
Part – A	Questions carrying 3 Marks
1	Define information technology and explain its importance in today's society.
2	What is the difference between information and knowledge?
3	List and briefly describe the four main components of an information system.
Part – B	Questions carrying 4 Marks
1	Explain the roles of primary and secondary memory in a computer system.
2	What is a motherboard, and what are its primary functions in a computer system?
Part – C	Questions carrying 7 Marks
1	Describe the components of an information system in detail, explaining how they interact to manage data and support decision-making.

Prepared By: J.J.Dhimar

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N. G. PATEL POLYTECHNIC

INFORMATION TECHNOLOGY

FORMAT FOR ASSIGNMENTS

Course Name (With Code): INTRODUCTION TO IT SYSTEMS (4311602)

Semester / Year: 1st SEM / 1st YEAR

Assignment Number: 1

Assignment CO Number: DI01016021.2

Sr. No.	Questions related to Course Outcomes
Part – A Questions carrying 3 Marks	
1	Explain Block Diagram of Digital computer.
2	Convert $(57)_{10} = (\text{---})_2$ And $(54.43)_{10} = (\text{---})_2$
3	Convert $(4A5B)_{16} = (\text{---})_2$
4	Explain NOT Gate with Truth Table.
5	Convert $(101001.1110)_2 = (\text{---})_{10}$
Part – B Questions carrying 4 Marks	
1	Explain AND , OR Gate with Truth Table
2	Convert $(834)_{10} = (\text{---})_8$
3	Convert $(1011001011)_2 = (\text{---})_8$
4	Convert $(A34B.C)_{16} = (\text{---})_{10}$ And $(4C3B)_{16} = (\text{---})_8$
Part – C Questions carrying 7 Marks	
1	Explain UNIVERSAL Gates with Truth Table.
2	Explain EX-OR and EX-NOR gate with Truth Table.

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FORMAT FOR ASSIGNMENTS

Course Name (With Code): Introduction to IT System(DI01016021)

Semester / Year: Fifth/Third

Assignment Number: 2

Assignment CO Number: DI01016021

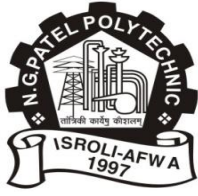
Sr. No.	Questions related to Course Outcomes
Part – A	Questions carrying 3 Marks
1	What is an Operating System (OS) and why is it essential for computer systems?
2	List three functions of an operating system.
3	Define batch processing in the context of operating systems.
Part – B	Questions carrying 4 Marks
1	Explain the differences between user mode and kernel mode in an operating system.
2	Discuss the main components of the Linux operating system architecture.
Part – C	Questions carrying 7 Marks
1	Discuss the architecture of the Linux operating system in detail, including its components and how they interact with each other. Explain the significance of the kernel in this architecture.

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FORMAT FOR ASSIGNMENTS

Course Name (With Code): INTRODUCTION TO IT SYSTEMS (4311602)

Semester / Year: First/First

Assignment Number: 4

Assignment CO Number: DI01016021.4

Sr. No.	Questions related to Course Outcomes
Part – A	Questions carrying 3 Marks
1	Explain Transmission Modes.
2	Differentiate synchronous and Asynchronous transmission.
3	Differentiate Serial and Parallel Transmission.
4	Define Modulation and list out types of modulation.
5	Explain frequency modulation in details.
6	List out an analog and digital modulation types.
Part – B	Questions carrying 4 Marks
1	Define multiplexing and demultiplexing.
2	Explain FDM, TDM, WDM.
3	explain co-axial cable.
4	List communication media.
Part – C	Questions carrying 7 Marks
1	Explain fiber optics.
2	Explain Ethernet and Rj-45.
3	Explain shielded and unshielded twisted pair cable.

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FORMAT FOR ASSIGNMENTS

Course Name (With Code): INTRODUCTION TO IT SYSTEMS (4311602)

Semester / Year: First/First

Assignment Number: 5

Assignment CO Number: DI01016021.4

Sr. No.	Questions related to Course Outcomes
Part – A	Questions carrying 3 Marks
1	Define MAC address and IP address.
2	Explain Classful Addressing.
3	Difference between IPv4 and IPv6.
4	Explain LAN , MAN, WAN.
5	Explain router, bridge and switch
6	List all network devices.
7	Explain Internet and Intranet.
Part – B	Questions carrying 4 Marks
1	Explain Topologies with it's Types.
2	Explain DNS.
3	Explain Access point in detail.
4	Explain NIC (Network Interface card)
Part – C	Questions carrying 7 Marks
1	Explain OSI model.
2	Explain connecting devices(Networking and internetworking)

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FORMAT FOR ASSIGNMENTS

Course Name (With Code): INTRODUCTION TO IT SYSTEMS (4311602)

Semester / Year: First/First

Assignment Number: 6

Assignment CO Number: DI01016021.5

Sr. No.	Questions related to Course Outcomes
Part – A	Questions carrying 3 Marks
1	Explain the need of information security.
2	Define confidentiality, integrity and availability.
3	Define virus.
4	Explain types of vulnerability.
5	Explain different security services.
6	Define : Encryption, Decryption.
Part – B	Questions carrying 4 Marks
1	Explain Man in the Middle attack.
2	Short note on Dos
3	Explain cryptography and list out types of cryptography.
Part – C	Questions carrying 7 Marks
1	Note on SQL injection.
2	Explain phishing attack.
3	Difference between active attack and passive attack.
4	Explain Symmetric key cryptography and Asymmetric key cryptography.

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