

(PGDIT01)

ASSIGNMENT - 1

P.G. DIPLOMA EXAMINATION, MARCH 2023.

Information Technology

BASICS OF IT

MAXIMUM : 30 MARKS

ANSWER ALL QUESTIONS

1. Explain about business pressures and organizational pressures with example.
2. What is role of IT support in different organizational levels? Explain detail.
3. Explain the working of various input devices with neat diagrams.
4. Discuss about different secondary storage devices with its working principle.
5. Write about procedure oriented and object oriented programming languages.

(PGDIT01)

ASSIGNMENT - 2

P.G. DIPLOMA EXAMINATION, MARCH 2023.

Information Technology

BASICS OF IT

MAXIMUM : 30 MARKS

ANSWER ALL QUESTIONS

1. What is an operating system? Discuss different types of operating systems.
 2. Discuss about logical data models and data warehouses with example.
 3. Explain about different communication media devices.
 4. What are the services provided by www and email? Explain in detail.
 5. Explain the physical forms available for establishing an Inter Connection Network.
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(PGDIT02)

ASSIGNMENT - 1

P.G. DIPLOMA EXAMINATION, MARCH 2023.

Information Technology

DATA STRUCTURE WITH C
MAXIMUM : 30 MARKS

ANSWER ALL QUESTIONS

1. What is flow chart? Describe the flowcharts for control structures.
2. What is an array? How the two dimensional arrays are represented in computer memory? Write array program to perform matrix multiplication.
3. What is string? Explain different string processing algorithms with suitable example.
4. (a) Explain various operations that are performed on queue with suitable algorithms.
(b) Write an algorithm for converting infix expression to prefix expression.
5. What is circular linked list? Explain how to insert and delete list in a circular linked list with an example.

ASSIGNMENT - 2

P.G. DIPLOMA EXAMINATION, MARCH 2023.

Information Technology

DATA STRUCTURE WITH C
MAXIMUM : 30 MARKS

ANSWER ALL QUESTIONS

1. (a) What is Binary tree? Explain how to represent the Binary tree with an example.
(b) Write an algorithm for post order traversal.
 2. What is an AVL tree? Explain the need for rotation of AVL trees. Construct an AVL tree for the list 8, 9, 11, 6, 5, 7, 10 by using successive insertion.
 3. Give an algorithm for quick sort and explain its time complexity. Trace the algorithm for the following data:
65, 70, 75, 80, 85, 60, 55, 50, 45.
 4. Explain the procedure for inserting and deleting an element from a binary search tree.
 5. Explain Heap sort algorithm. Create Heap for the following elements and then sort them.
(13, 102, 405, 136, 15, 105, 390, 432, 28, 444)
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(PGDIT03)

ASSIGNMENT - 1

P.G. DIPLOMA EXAMINATION, MARCH 2023.

Information Technology

DATA BASE MANAGEMENT SYSTEMS

MAXIMUM : 30 MARKS

ANSWER ALL QUESTIONS

1. What is information system? Describe different components of information system and also give various types of information system.
2. Explain in detail about 3NF, 4NF and BCNF with suitable examples.
3. Write about indexed sequential and direct access file organization with neat sketch.
4. Discuss in detail the operators SELECT, PROJECT and UNION with suitable examples.
5. What is Entity set? and also define Relationship set. List and explain the symbols used to draw ER Diagram.

(PGDIT03)

ASSIGNMENT - 2

P.G. DIPLOMA EXAMINATION, MARCH 2023.

Information Technology

DATA BASE MANAGEMENT SYSTEMS

MAXIMUM : 30 MARKS

ANSWER ALL QUESTIONS

1. Explain different commands of data manipulation language with syntax.
 2. Write about PC-FOCUS database description with college database.
 3. What is IMS? Explain about IMS database description and IMS data manipulation.
 4. Explain the ARIES recovery method. When does a system recover from a crash? In what order must a transaction be undone and redone? Why is this order important?
 5. Discuss different security and maintenance issues in databases.
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(PGDIT03)

(PGDIT04)

ASSIGNMENT - 1

P.G. DIPLOMA EXAMINATION, MARCH 2023.

Information Technology

**COMPUTER NETWORKS
MAXIMUM : 30 MARKS
ANSWER ALL QUESTIONS**

1. Explain different Layers and their functionalities in OSI reference Model.
2. Explain the role of fiber optics in computer networks. How a fiber optic network is formed?
3. Explain about Datagram Networks and Virtual Circuit Networks.
4. What is the difference between error detection and correction? Explain any one error correction technique with suitable example.
5. What is Ethernet? Discuss about Fast Ethernet and Gigabit Ethernet

(PGDIT04)

ASSIGNMENT - 2

P.G. DIPLOMA EXAMINATION, MARCH 2023.

Information Technology

COMPUTER NETWORKS

MAXIMUM : 30 MARKS

ANSWER ALL QUESTIONS

1. Explain about various types of switching methods with examples.
2. Explain shortest path routing with suitable example.
3. What is IP address? Explain IPv4 datagram format and importance of each field.
4. What is the role of Domain Name Server (DNS) in Internet? Explain the hierarchy of various domain names.
5. (a) Explain briefly about the Architecture of WWW.
(b) Describe message authentication operating using RSA algorithm.

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(PGDIT05)

ASSIGNMENT - 1

P.G. DIPLOMA EXAMINATION, MARCH 2023.

Information Technology

COMPUTER ORGANIZATION

MAXIMUM : 30 MARKS

ANSWER ALL QUESTIONS

1. Describe the structure of IAS computer and also mention expanded structure of IAS computer.
2. State and explain the evolution of intel x86 architecture and embedded systems.
3. Write about bus inter connection scheme and multiple bus hierarchies.
4. Describe different types of interrupts? Explain about Interrupt cycle with its flow chart.
5. What is the principle of optical memory? Discuss about various optical memory devices.

(PGDIT05)

ASSIGNMENT - 2

P.G. DIPLOMA EXAMINATION, MARCH 2023.

Information Technology

**COMPUTER ORGANIZATION
MAXIMUM : 30 MARKS
ANSWER ALL QUESTIONS**

1. State and explain seven RAID levels and how redundancy is achieved in a RAID system.
 2. Draw flow chart for multiplication of two floating point numbers.
 3. Discuss different integers arithmetic operations with suitable example.
 4. How addressing mode is significant for referring memory? List and explain types of addressing modes.
 5. Explain about register organization in microprocessor.
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(PGDIT05)

(PGDIT06)

ASSIGNMENT - 1

P.G. DIPLOMA EXAMINATION, MARCH 2023.

Information Technology

OPERATING SYSTEMS

MAXIMUM : 30 MARKS

ANSWER ALL QUESTIONS

1. What are the various components of Operating System structure? And explain simple layered approach of Operating System in detail.
2. (a) With a neat sketch explain process state diagram.
(b) Discuss the essential properties of Time sharing and Distributed systems.
3. Consider the following four processes, with the length of the CPU burst time given in milliseconds.

Process	Arrival Time (ms)	Burst Time (ms)
P ₁	1	6
P ₂	1	5
P ₃	2	5
P ₄	2	3

Find Average Waiting Time and Turnaround time for given Process using FCFS and SJF Algorithms.

4. What is Semaphore? How can we achieve the synchronization using semaphore for producer consumer problem?
5. What is Deadlock? State four necessary conditions for a Deadlock situation to arise? Explain about the Banker's algorithm for deadlock avoidance.

(PGDIT06)

ASSIGNMENT - 2

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Information Technology

OPERATING SYSTEMS

MAXIMUM : 30 MARKS

ANSWER ALL QUESTIONS

1. Write a detailed note on I/O system in reference to device management.
 2. What is virtual memory? Discuss the benefits of virtual memory techniques.
 3. What are the objectives of file management system? Discuss the indexed file allocation method with an example.
 4. (a) What is Thrashing? Explain the Causes of Thrashing.
(b) Discuss the procedure for page fault in demand paging.
 5. Explain the protection mechanism illustrating the use of protection domain and access control list.
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(PGDIT06)