(PGDIT 01)
ASSIGNMENT 1

P.G. DIPLOMA EXAMINATION,
DECEMBER 2020.

Information Technology

BASICS OF IT
MAXIMUM MARKS : 30
ANSWER ALL QUESTIONS

1. What is computer based information systems (CBIS)? Explain various components of CBIS.

2. Discuss how to manage information technology in organizations.

3. Write about computer hierarchy in detail.

4. Explain about the working of various input devices with neat sketches.

5. Write about types of application software and also describe software selection factors.

(PGDIT 01)

ASSIGNMENT 2

P.G. DIPLOMA EXAMINATION,
DECEMBER 2020.

Information Technology

BASICS OF IT
MAXIMUM MARKS : 30
ANSWER ALL QUESTIONS

1. Discuss about different classification of programming languages and its features.

2. Describe the limitations of file systems and how to overcome these limitations by modern database approach.

3. Write about various communication media and network devices.

4. Write about world wide web and give various challenges of internet.

5. Discuss evaluation of internet and operation of the internet.

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(PGDIT 02)

ASSIGNMENT 1

P.G. DIPLOMA EXAMINATION,
DECEMBER 2020.

First Year

Information Technology

DATA STRUCTURE WITH C
MAXIMUM MARKS : 30
ANSWER ALL QUESTIONS

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1. Describe various classification of data structures and give different data structure operations.

2. What is an algorithm? Discuss different asymptotic notations used to represent algorithm   complexity.

3. Discuss various string pattern algorithms with suitable example.

4. Write about representation of linear array and records in computer memory.

5. What is double linked list? Describe insertion and deletion operations on double linked list.

(PGDIT 02)

ASSIGNMENT 2

P.G. DIPLOMA EXAMINATION,
DECEMBER 2020.

First Year

Information Technology

DATA STRUCTURE WITH C
MAXIMUM MARKS : 30
ANSWER ALL QUESTIONS

1. Explain about circular and priority queues with suitable examples.

2. What is a binary search tree? Create a binary search tree for inserting the following data.

    50, 45, 100, 25,49, 120, 105, 46, 90, 95. And also explain deletion in the above tree.

3. Briefly explain about the following trees with example:

    (a) Balanced binary tree

    (b) AVL tree

    (c) Threaded binary trees.

4. Explain the trace of selection sort on following data.

    42, 23, 74, 11, 65, 58, 94, 36, 99, 87

5. Illustrate merge sort algorithm with suitable example and also give its complexity.

(PGDIT 02)

(PGDIT 03)

ASSIGNMENT 1

P.G. DIPLOMA EXAMINATION,
DECEMBER 2020.

Information Technology

DBMS (DATA BASE MANAGEMENT SYSTEM)
MAXIMUM MARKS : 30
ANSWER ALL QUESTIONS

1. Write the features of conventional file system and give its limitations. How to overcome these limitations by relational databases?

2. Describe various associations between record types with suitable example.

3. Briefly explain about features of different data models.

4. (a) What is pointer? Write about different types of pointers.

   (b) Briefly explain about ring and queue data structures.

5. Write the guidelines to map conceptual data model to hierarchical and network models.

(PGDIT 03)

ASSIGNMENT 2

P.G. DIPLOMA EXAMINATION,
DECEMBER 2020.

Information Technology

DBMS (DATA BASE MANAGEMENT SYSTEM)
MAXIMUM MARKS : 30
ANSWER ALL QUESTIONS

1. Explain different symbolic notations used in database action diagrams with example.

2. Describe data retrieval and modification commands in IDMS with syntax.

3. Discuss about different symbols used to represent database action diagrams with example.

4. What is relational algebra? Describe various operations of relational algebra.

5. Explain about security and maintenance of databases.

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(PGDIT 03)

(PGDIT 04)

ASSIGNMENT 1

P.G. DIPLOMA EXAMINATION,
DECEMBER 2020.

First Year

Information Technology

COMPUTER NETWORKS
MAXIMUM MARKS : 30
ANSWER ALL QUESTIONS

1. What is CRC? What are the steps to perform CRC computation? Explain with suitable example.

2. Discuss different types of network topologies with neat sketches.

3. What is Ethernet? Explain Fast ethernet and Gigabit ethernet.

4. Explain about different types of centralized access and distributed access mechanisms.

5. Compare and contrast Local Area Networks and Wide Area Network technologies.

(PGDIT 04)

ASSIGNMENT 2

P.G. DIPLOMA EXAMINATION,
DECEMBER 2020.

First Year

Information Technology

COMPUTER NETWORKS
MAXIMUM MARKS : 30
ANSWER ALL QUESTIONS

1. Write about different types of bridges and switches with example.

2. Explain Distance Vector routing and shortest path routing with example.

3. Discuss the features of File Transfer Protocol and Hyper Text Transfer Protocol.

4. Explain about IPv6 and IPv4 datagram format and importance of each filed.

5. Write about system threats and fire walls.

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(PGDIT 04)

(PGDIT 05)

ASSIGNMENT 1

P.G. DIPLOMA EXAMINATION,
DECEMBER 2020.

First Year

Information Technology

COMPUTER ORGANISATION
MAXIMUM MARKS : 30
ANSWER ALL QUESTIONS

1. Discuss about IAS computer instruction set with flow chart.

2. Write about functional view of computer and top level structure of computer.

3. What is bus structure of PCI? Describe various PCI commands.

4. What is an interrupt? What types of transfers must a computer's interconnection structure
    (e.g., bus) support?

5. Write about layout of magnetic disk and also describe the physical characteristics of magnetic disk Systems.

(PGDIT 05)

ASSIGNMENT 2

P.G. DIPLOMA EXAMINATION,
DECEMBER 2020.

First Year

Information Technology

COMPUTER ORGANISATION
MAXIMUM MARKS : 30
ANSWER ALL QUESTIONS

1. Explain about comparisons of different RAID levels.

2. Draw flow chart for multiplication of two floating point numbers.

3. Draw and explain flowchart for addition and subtraction operations with sign-magnitude data.

4. Explain about instruction cycle state diagram with neat diagram.

5. Write about register organization of x86 processor family.

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(PGDIT 06)

ASSIGNMENT 1

P.G. DIPLOMA EXAMINATION, DECEMBER 2020.

First Year

Information Technology

OPERATING SYSTEMS
MAXIMUM MARKS : 30
ANSWER ALL QUESTIONS

1. What are the system components of an operating system and explain them?

2. What are the various process scheduling concepts? Explain them.

3. Explain Dining Philosopher problem in process synchronization.

4. Explain Contiguous and Noncontiguous memory allocation with example.

5. Consider the following page reference string: 1,2, 3, 4, 2, 5, 3, 4, 2, 6, 7, 8, 7, 9, 7, 8, 2, 5, 4 and 9. How many page faults would occur for LRU, FIFO and page optimal page replacement algorithms when the number of frames are three.

(PGDIT 06)

ASSIGNMENT 2

P.G. DIPLOMA EXAMINATION, DECEMBER 2020.

First Year

Information Technology

OPERATING SYSTEMS
MAXIMUM MARKS : 30
ANSWER ALL QUESTIONS

1. Discuss various schemes for defining the logical structure of directory.

2. Write short notes on:

    (a) Disk structure

    (b) Indexed allocation

    (c) Shortest-seek-Time-First (SSTF) scheduling

3. What is meant by RAID levels? Which level is used for what purpose?

4. What are the various worm and viruses affects to system? How to handle these problems by operating systems?

5. What is the primary goal of Authentication and how can you achieve that through the pass word mechanism?

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(PGDIT 06)