Assignment-I

P.G. DIPLOMA EXAMINATION,
june 2022.

Information Technology

BASICS OF IT.
MAXIMUM MARKS :30
ANSWER ALL QUESTIONS

1. What are the capabilities expected of information systems in modern organizations? Explain.

2. Explain about the Computer Based Information System (CBIS).

3. State and explain about different generations of computer and its features.

4. Explain the working of the following input and output devices with neat sketch:

    (a) Monitors

    (b) Joysticks

    (c) Scanners

5. Write about application software and system software's

Assignment-2

P.G. DIPLOMA EXAMINATION,
june 2022.

Information Technology

BASICS OF IT.
MAXIMUM MARKS :30
ANSWER ALL QUESTIONS

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1. Discuss the features of Pascal, C, C++ and java programming languages.

2. Explain about data life cycle and different sources of data.

3. Describe the different types of communications media and its advantages and Disadvantages

4. Discuss different network topologies and network protocols.

5. Explain about the services of internet and intranet.

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(PGDIT 02)

Assignment-I

P.G. **DIPLOMA** EXAMINATION,
june 2022.

First Year

Information **Technology**

DATA STRUCTURE WITH C
MAXIMUM MARKS :30
ANSWER ALL QUESTIONS

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1. Explain about various control structures used to develop an algorithm with its flow charts.

2. (a) Write an algorithm to find largest of list of elements.

    (b) Explain about Abstract data model.

3. Describe the various string operations and also write about fixed length storage and variable length storage of strings with an example.

4. Explain about records and pointer. How the memory is assigning for records?

5. Explain the concept of circular queue. Compare circular queue with simple queue with suitable example

Assignment-2

P.G. **DIPLOMA** EXAMINATION,
june 2022.

First Year

Information **Technology**

DATA STRUCTURE WITH C
MAXIMUM MARKS :30
ANSWER ALL QUESTIONS

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1. How to create nodes for single and double linked lists? Explain the different operations of singly linked list.

2. Explain the procedure to insert an element into and deleting an element from a binary search tree with suitable example.

3. (a) What is B - tree? Describe the properties of a B -Trees.

    (b) Write an algorithm to delete a node from AVL tree.

4. Describe insertion sort algorithm and trace the steps of insertion sort for sorting the List- 12, 19, 33, 26, 29, 35, 22. 37. Find the total number of comparisons made.

5. Illustrate quick sort algorithm with suitable example and analyze its complexity.

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Assignment-I

P.G. DIPLOMA EXAMINATION,
june 2022.

First Year

Information **Technology**

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

1.   Explain various components of information system and different types of information systems.

2.   State and explain different associations between files and records with example.

3.   Describe different data structures used to store the data with proper example.

4.   What is data model? Explain about relational model and hierarchical data models.

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

     (b)   Explain about Entity - Relation diagram with suitable example.

Assignment-2

P.G. DIPLOMA EXAMINATION,
june 2022.

First Year

Information **Technology**

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

1. What are the database action diagrams? How they are represented?

2. Explain about PC - FOCUS manipulation and PC - FOCUS description.

3. Explain different issues in integrated database management system (IDMS).

4. Write about the following SQL commands with syntax and example queries:
   (a) Drop
   (b) Alter
   (c) Insert
   (d) Select
   (e) Create.

5. What is meant by database locking? Describe different locking mechanisms in DBMS.

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(PGDIT 04)

Assignment-I

P.G. DIPLOMA EXAMINATION,
june 2022.

First Year

Information Technology

COMPUTER NETWORKS
MAXIMUM MARKS :30
ANSWER ALL QUESTIONS

1. Discuss various communication media used in network connection.

2. Explain about various network topologies with neat diagram.

3. What is multiplexing? Write about time division and frequency multiplexing.

4. Explain the general principles of congestion control.

5. In detail, explain the various ALOHA protocols.

(PGDIT 04)

Assignment-2

P.G. DIPLOMA EXAMINATION,
june 2022.

First Year

Information Technology

COMPUTER NETWORKS
MAXIMUM MARKS :30
ANSWER ALL QUESTIONS

1.   Explain the features of LAN, MAN and WAN.

2.   Explain Link-State arid shortest path Routing algorithms.

3.   (a)   What is the role of Domain Name Server (DNS) in Internet? Explain the hierarchy of various domain names.

     (b)   What is CSMA? Explain CSMA with Collision Detection.

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

5.   State and explain different security issues in Computer networks.

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(PGDIT 05)

Assignment-I

P.G. DIPLOMA EXAMINATION,
june 2022.

Information Technology

COMPUTER ORGANISATION

. MAXIMUM MARKS :30

ANSWER ALL QUESTIONS

1. Describe the structure of IAS computer and also specify the additional features of

2. expanded structure of IAS computer.

3. Explain the performance assessment issues in digital computer.

4. What is PCI? Write about PCI configuration and its commands.

5. Explain about bus inter connection scheme and multiple bus hierarchies.

Assignment-2

P.G. DIPLOMA EXAMINATION,
june 2022.

Information Technology

COMPUTER ORGANISATION

. MAXIMUM MARKS :30

ANSWER ALL QUESTIONS

1. Explain the working of optical memory devices and mention its advantages and disadvantages.

2. Explain how is redundancy achieved in a RAID system and compare RAID levels.

3. Write Booth multiplication algorithm for multiplying binary integers in signed 2's complement representation.

4. Explain the procedure to division of two floating point numbers with neat flowchart.

5. Explain about user visible registers, control and status registers.

6. Explain about instruction pipeline with timing diagram.

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(PGDIT 06)

Assignment-I

P.G. DIPLOMA EXAMINATION, june 2022

First Year

Information Technology

OPERATING SYSTEMS
MAXIMUM MARKS :30
ANSWER ALL QUESTIONS

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1.   (a)Explain about time sharing, multitasking and distributed operating systems.

    b)   Explain the layered system structure of operating system.

2.   (a)What is scheduler? Explain various types of Schedulers.

    (b)   Explain about Round robin scheduling algorithm with suitable example.

3.   Explain Dining Philosopher problem in process synchronization.

4.   What is meant by Virtual memory? Give some major benefits which are make applicable.

5.   Explain the indexed and linked file allocation methods. Discuss the advantages and Disadvantages in those methods.

(PGDIT 06)

Assignment-2

P.G. DIPLOMA EXAMINATION, june 2022

First Year

Information Technology

OPERATING SYSTEMS
MAXIMUM MARKS :30
ANSWER ALL QUESTIONS

1.   For the memory with 3 page frames and the following reference strings: 4, 3, 4, 1, 2, 5, 3, 2, 1. Find out the number of page faults for the FIFO and optimal page replacement algorithms.

2.   What is dead lock? What are the necessary conditions for deadlock? Describe the method for recovering from deadlock.

3.   Explain the various disk scheduling techniques.

4.   Explain about I/O hardware and application I/O interface.

5.   Explain about User-Oriented access control and Data-oriented access control.

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