

S. S. Jain Subodh PG (Autonomous) College, Jaipur
M.Sc. (IT)- II Semester
Object Oriented
Programming Concepts
using Java Programming (PMIT-201)
Assignment

Attempt any four questions.

Unit- I

1. Explain different iterative statements of Java with suitable examples.
2. Briefly discuss different concepts of OOPs.

Unit- II

3. What do you understand by packages? How do we create and use packages in java? Explain.
4. What are interfaces? Explain in detail with suitable examples.

Unit- III

5. Briefly discuss Exceptions handling in Java? Also explain differences between throw and throws keywords.
6. Describe Applet life cycle with suitable example.

Unit- IV

7. Write a note on database handling in Java.
8. What is multithreading? How do we implement multithreading in Java? Explain.

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Affiliated to University of Rajasthan, Jaipur

MSC-IT Semester IV, 2025 INFORMATION TECHNOLOGY

Assignment: Data Warehousing and Data Mining

Paper Title: PMIT401

NOTE : ATTEMPT four TWO QUESTIONS.

UNIT-I

Question 1: Explain the Various Data Warehouse Planning and Designing Approaches.

Question 2: Write short note on

- i. Load Manager
- ii. Horizontal and Vertical Portioning
- iii. Data Marts and Metadata Transformation.

UNIT-II

Question 3: Explain various Database Schema

Question 4: Write short note on

- i. Database structures and layout and file systems.
- ii. OLAP function and tools,
- iii. OLAP Servers

UNIT-III

Question 5: Explain Backup strategies and disaster recovery and operations of Warehouse.

Question 6: Write short note on

- i. Testing data warehouse-Develop test plan
- ii. Testing backup recovery,
- iii. Testing operational environment.

UNIT-IV

Question 7: Difference between technical and social context for data mining

Question 8: Write short note on

- i. data mining interface
- ii. data mining methodologies,
- iii. data preprocessing

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Assignment

MSIT402 Elective Paper III:

Mobile Application Development, 2025

Unit – I

Q. 1 Explain History of mobile software .

Q 2. Describe mobile platform in detail.

Unit-II

Q. 3 Explain Anatomy of an Android applications.

Q. 4 Explain followings

(a) Application Context

(b) Android Manifest File

Unit- III

Q. 5 Discuss android User Interface Screen elements,

Q. 6 Explain Drawing and Working with Animation in android.

Unit-IV

Q. 7. How will you Manage data using SQLite.

Q. 8. How will you use Android Web APIs.

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M.Sc. IT IV Semester 2025

Subject –Artificial Intelligence and Expert System (PMIT-402)

ASSIGNMENT

Attempt any four questions.

UNIT – I

Q.1 What is Artificial Intelligence ? Discuss application areas of AI.

Q.2 What is state space search method ? Explain Traveling and Sales man problem in detail

UNIT – II

Q.3 What is heuristic search? Explain A* method in detail.

Q.4 Explain hill climbing method? Explain limitations of Hill Climbing method .

UNIT – III

Q.5 Write short note on: - (a) Conceptual Dependency (b) Frames (c) Fuzzy logic

Q.6 What is reasoning ? Explain different types of reasoning.

UNIT – IV

Q.7 What is Expert System ? Explain various components of expert system with example.

Q.8 What is Learning? Explain different types of learning.

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M. Sc. I.T. Semester-IV, 2025

PMIT402b Elective Paper I: Information Protection and Security

Assignment

Attempt any four questions.

UNIT-I

Q1. Describe Advanced Encryption Standard Algorithm in detail.

Q2. Write notes on following-

- a) Security Attack
- b) Asymmetric Encryption

UNIT-II

Q3. Explain RSA algorithm with proper example.

Q4. Write Short Notes on following-

- a) Fermat's Theorem
- b) Random Number Generation

UNIT-III

Q5. Describe Secure Hash Algorithm (SHA)

Q6. Explain Digital Signature Standard (DSS).

UNIT-IV

Q7. Explain Digital Signature Standard in detail.

Q8. Write notes on-

- a) Firewall
- b) SSL

M.Sc. IV Semester, 2025
INFORMATION TECHNOLOGY
Assignment: Open Source Operating System
Paper Code: PMIT403

Note: Attempt any four questions.

Unit- I

1. Write about the following Unix commands with examples:
cal, date, who, printf, bc, script, mailx, passwd, tty, sty
2. Write short note on
 - i. inode
 - ii. Super Block
 - iii. Kernel & Shell

Unit- II

3. Explain Process Management in Linux
4. Describe UNIX file system advantages and also state different commands used in system calls for input output operations.

Unit- III

5. (a) What is dash in shell programming? Explain with an example.
(b) Write a shell script to accept file name from user and delete that file if it exists, else provide appropriate message to user.
6. (a) Write a shell script to count the number of lines in a text file without using “wc” command.
(b) Difference between Shell Environment Variables and User Defined Variables.
Demand Paging

Unit- IV

7. Explain different tasks of System Administrator.
8. Explain in detail booting and shutdown process of Linux operating system.

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Assignment

M.Sc IT IV Sem April 2025

PMIT403b: Mobile Application Development

Attempt any four questions.

Unit – I

Q. 1 What is SDK ? Explain in detail.

Q 2. Write down step to create a sample Android application.

Unit-II

Q. 3 Explain Activities, Services, Intents in android.

Q. 4 Explain different types of resources in android.

Unit- III

Q. 5 Discuss android User Interface Screen elements,

Q. 6 Explain Drawing and Working with Animation in android.

Unit-IV

Q. 7. How will you Manage data using SQLite.

Q. 8. How will you use Android Web APIs.

S. S. Jain Subodh P. G. College
M. Sc. Information Technology II Semester, 2025
Data Structure and Algorithms (PMIT202)

ASSIGNMENT

Attempt any four questions.

UNIT - I

1. What is an algorithm? What are the characteristics of an algorithm? What do you mean by efficiency of an algorithm?
2. Write an algorithm and program to create an array of n integer elements and apply insert, delete and traverse operations on it.

UNIT - II

3. Write algorithms and programs for creating link list and apply operations such as traverse, insert after, insert before, delete after, delete before and delete particular element in the given link list.
4. Write an algorithm and program to sort an array through Bubble Sort technique.

UNIT - III

5. Write algorithm and program to perform the operations like - push, pop and show elements in a stack through array.
6. Write algorithms and programs to perform the operations like - insert, delete and show elements in a simple queue.

UNIT - IV

7. Write an algorithm to create a binary search tree and perform operations like insert elements, in-order, pre-order and post-order traversing of binary search tree.
8. Write an algorithm to perform BFS and DFS operations on graphs.

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M.Sc. IT II Semester
Web Designing & Development (PMIT203)
Assignment

1. Write Short notes on-
 - b. World Wide Web (WWW)
 - c. Web Server & Web Client
2. a) Lists b) Text Formatting tag

Unit-II

3. Explain Different Type of style sheet in CSS with examples.
4. Describe with example—
 - a. Tables

Unit-III

5. What are the different types of JavaScript Operators? With an example.
6. Explain DataTypes & Array in Java script.

Unit-IV

- ~~1. What is a form validation? What are the major attributes of the form? Explain any six form validation components with example.~~
- ~~2. Explain components of Document Object Model (DOM).~~
7. What is a form validation? What are the major attributes of the form? Explain any six form validation components with example.
8. Explain various events in Java script.

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M. Sc. IT II Semester

Session 2024-25

**Subject –Management Information System
(PMIT- 204)**

ASSIGNMENT

Note- Attempt any TWO questions from any Unit.

UNIT-I

- 1. What do you mean by System? Explain different types of Information systems.**
- 2. What is SDLC? Describe different phases of SDLC.**

UNIT- II

- 3. What are features of MIS. What do you understand by MIS Plans, Prioritization and Developmental strategies?**
- 4. What do you mean by conceptual Design of MIS. How alternative system design is important to system ?**

UNIT-III

- 5. What are application of basic system design concepts in MIS?**
- 6. Describe role of Top Management, End User and various department in MIS Development?**

UNIT-IV

- 7. What do you understand by Office Automation system? How AI and Expert system works?**
- 8. What are the Pitfall in MIS Development.**

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Msc. IT Semester II, April 2025

Assignment

Subject: Data Communication and Computer Network

Paper Code: PMIT 205

Instructions to the Candidates NOTE:

Attempt any four questions

Unit - I

- 1) What do you mean by Computer Network? Explain type of Networks.
- 2) Explain Data Communication System along with Mode of Communication

Unit - II

- 3) What do you mean by Network Topology? Explain all type of Topologies in detail.
- 4) Explain all type of Guided Media.

Unit – III

- 5) Explain OSI Model.
- 6) Explain Asynchronous and Asynchronous Transmission.

Unit – IV

- 7) Explain following
 - a) Switches
 - b) Router
 - c) Bridge
- 8) Explain following
 - a) SMTP
 - b) FTP
 - c) Broadband