

# **S.S. Jain Subodh P.G. (Autonomous) College**

**M. Sc. IT I Semester**

**Session 2024-25**

**Subject –Programming Fundamentals (PMIT-101)**

## **ASSIGNMENT**

**Note- Attempt any TWO questions from any Unit.**

### **UNIT-I**

Q1. What is switch statement? Write a program in C language to print whether the given character is vowel or consonant using switch statement.

Q2. Explain the following:

- (a) Algorithm
- (b) Flowchart
- (c) Data Types of C language

### **UNIT-II**

Q3. What is Array? Differentiate between one-dimensional and two-dimensional array with the help of an example.

Q4. Explain the following:

- (a) While & Do While Loop
- (b) Break & Continue statement
- (c) Strcpy() & Strcmp() function

### **UNIT-III**

Q5. What are Functions? Explain the need and elements of user-defined functions.

Q6 Explain the following:

- (a) Pointers
- (b) Recursive Function
- (c) Printf() & scanf()

### **UNIT-IV**

Q7. Write a short note on File handling in C language.

Q8. Explain the following:

- a) Structure
- b) Union
- c) Dynamic Memory Allocation

# S.S. Jain Subodh P.G. (Autonomous) College

M.Sc IT I Semester Session 2024-25

Subject – Database Management System (PMIT-102)

## ASSIGNMENT

Note- Attempt any TWO questions from any Unit.

### UNIT-I

Q1. Explain different architectures of DBMS with neat diagrams. Also explain different views of Data Schemes and Instances.

Q2. Explain all components of ER Diagram with figure.

### UNIT-II

Q3. What is Normalization? Differentiate between 3NF and BCNF normal form in DBMS.

Q4. Write short notes on the following relational algebra operations-

- Union
- Intersection
- Projection

### UNIT-III

Q5. Write a short note on Structured Query Language. Explain its different data types and operators.

Q6. Consider this below given table. Create Employee relation and insert atleast 5 records in this.

EMPLOYEE	FNAME	MINIT	LNAME	SSN	BDATE	ADDRESS	SEX	SALARY	SUPERSSN	DNO
	John	B	Smith	123456789	1965-01-09	731 Fondren, Houston, TX	M	30000	333445555	5
	Franklin	T	Wong	333445555	1955-12-08	638 Voss, Houston, TX	M	40000	888665555	5
	Alicia	J	Zelaya	999887777	1968-07-19	3321 Castle, Spring, TX	F	25000	987654321	4
	Jennifer	S	Wallace	987654321	1941-06-20	291 Berry, Belaire, TX	F	43000	888665555	4
	Ramesh	K	Narayan	888884444	1982-09-15	975 Fire Oak, Humble, TX	M	38000	333445555	5
	Joyce	A	English	453453453	1972-07-31	5631 Rice, Houston, TX	F	25000	333445555	5
	Ahmad	V	Jabbar	987987987	1959-03-29	960 Dallas, Houston, TX	M	25000	987654321	4
	James	E	Borg	888665555	1937-11-10	450 Stone, Houston, TX	M	50000	null	1

### UNIT-IV

Q7. What is a Deadlock? Explain the deadlock detection and recovery techniques.

Q8. Write short notes on following-

- Distributed database
- Client-Server database
- Concurrency Control

**S. S. JAIN SUBODH P.G.(AUTONOMOUS) COLLEGE,  
JAIPUR**

Affiliated to University of Rajasthan, Jaipur  
**M.Sc. IT I Semester**

**Assignment**

**Sub- Fundamental Information Technology**

**Paper Code- PMIT-103**

**Max. Marks: 10**

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**Instructions to the Candidates**

NOTE: From each unit candidates are required to answer any two questions from any unit. (5X2=10 marks)

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**UNIT – I**

Q. 1 What is Information Technology? Explain Application areas of IT.

Q.2 Discuss various input and output devices in detail.

**UNIT - II**

Q3 Describe different types of memories in detail.

Q4 Explain various storages devices.

**UNIT - III**

Q. 5 What is program, algorithm, flowchart, pseudo code.

Q6 Explain computer hardware and software in detail.

**UNIT - IV**

Q7 Explain followings

- (a) Electronic mail
- (b) Web Browsers
- (c) Search Engines
- (d) Internet Service Providers.

Q8 Discuss followings

- (a) Viruses
- (b) Anti-viruses
- (c) Firewalls

**M.Sc.(IT)First Semester, 2024**  
**Subject : Computer Architecture**  
**Paper Code: PMIT104**

**Unit- I**

1. What is Computer? Explain the Digital computer system with diagram.
2. Explain sequential circuit with diagram and truth table..

**Unit- II**

3. Explain the motherboard with RISC and CISC processor.
4. (a) What are the different types of System Buses explain with Diagram.  
(b) Explain Expansion Slots :-ISA, MCA, EISA, PCI, AGP

**Unit- III**

5. Explain Input and Output devices in details.
6. Write short note on the following:-
  - a) Hard disk
  - b) Magnetic tape
  - c) Modem
  - d) Optical disk

**Unit- IV**

7. What is memory in computer organization? Explain in detail
8. Describe about the Addressing data transfer techniques.

**M.Sc. First Semester, 2024**  
**INFORMATION TECHNOLOGY**  
**Assignment: Operating System**  
**Paper Code: PMIT105**

**Unit- I**

1. What do you mean by Operating System? Explain Assembler, Compiler and Interpreter.
2. Define Software. How many types of software are there? Explain different types of operating systems.

**Unit- II**

3. Define Scheduling. Explain different types of schedulers.
4. What is meant by Deadlock? What are the necessary conditions for deadlocks to occur and how can they be prevented? Explain?

**Unit- III**

5. What is Memory Management? How does operating system perform necessary action and use important mechanism for better memory management? Explain by giving suitable example.
6. Write short note on the following:-
  - a) Demand Paging
  - b) Virtual Memory
  - c) Page Fault

**Unit- IV**

7. What file access pattern is particularly suited to chained file allocation on disk? What file allocation strategy is most appropriate for random access files?
8. Briefly explain directory structure, single level, two level and tree structure.

**S.S. Jain Subodh P.G. (Autonomous) College, Jaipur**  
**M.Sc. IT Semester-III -2024**  
**PMIT301:.NetTechnologies**  
**Assignments**

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**Attempt any two questions.**

**Unit-I**

1. Explain Architecture of the .Net framework with diagram.
2. What is namespaces explain with an example?

**Unit-II**

3. What is State Management in ASP.Net? Describe client side and server side techniques with suitable examples?
4. Write short note on with example:

(i) Page life cycle events (II) Rich Web Controls (III) Validation Controls

**Unit-III**

5. What is Web service? Discuss the steps involved in creating in web service in ASP.NET How the services are utilized other applications.
6. Write short note on with example:

(i) UDDI      (II) SOAP      (III) WSDL      (IV)WebService Proxy

**Unit-IV**

7. Explain ADO.NET Object Model with examples.
8. Write short notes on:
  - (i) Write a Programme for Populating DropDownList & GridView Control from database.
  - (ii) .Net Data Providers
  - (iii) ExecuteNonQuery(), ExecuteScaler(), ExecuteReader()

**S. S. Jain Subodh PG (Autonomous) College, Jaipur**  
**M.Sc. (IT)- III Semester**  
**PHP Programming (PMIT-303)**  
**Assignment**

*Attempt any Two questions. Each Question Carries equal marks*

**Unit- I**

1. Discuss various features of PHP in detail. Also explain different data types of PHP.
2. With the help of examples, explain various control statements of PHP.

**Unit- II**

3. Describe the process of defining a function in PHP, including parameter passing and returning values. Also explain scope of variables
4. With the help of suitable examples, Explain the different types of arrays in PHP.

**Unit- III**

5. What are superglobal variables? Explain with appropriate examples.
6. Describe cookies & session management in PHP.

**Unit- IV**

7. Explain the key steps involved in working with files in PHP, including opening and closing files, copying, renaming, and deleting files. Discuss the different file opening modes and when to use each mode. Also Provide examples of reading and writing operations on files in PHP.
8. Write a note on “*Database Handling in PHP*”.

**S. S. Jain Subodh PG (Autonomous) College, Jaipur**  
**M.Sc. (IT)- III Semester**  
**E-Commerce (PMIT 304)**  
**Assignment - 2024**

*Attempt any Two questions. Each Question Carries equal marks*

**Unit - I**

- 1) What do you mean by Ecommerce? Explain its advantage and disadvantages.
- 2) Define Scope of Ecommerce and compare Traditional commerce and Ecommerce.

**Unit - II**

- 3) Explain Ecommerce Model (any two) based on Type of transactions.
- 4) What do you mean by Competitive advantages? Explain competitive force of Portal's model.

**Unit – III**

- 5) What is EDI? Explain all types of EDI and its standards.
- 6) Explain following
  - a. Electronic Catalogs
  - b. Digital Libraries
  - c. E-governance
  - d. Firewall

**Unit – IV**

- 7) Explain all types of payment systems.
- 8) What do you mean by Payment Gateway?



# S. S. JAIN SUBODH P.G. COLLEGE, JAIPUR

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## (MSC-IT Semester III) Software Engineering ASSIGNMENT QUESTIONS, 2024

Subject: Software Engineering and Testing

Paper Title: PMIT305

### Software Engineering ASSIGNMENT QUESTIONS

Attempt any two:

1. Illustrate the prototype paradigm in process models and list out various merits and demerits of prototyping.
2. Construct Water-fall model and write the advantages and disadvantages of the model with a neat diagram.
3. Discuss the term software? List out the characteristics of software in comparison with hardware characteristics.
4. Discuss about prescriptive process models.
5. Unified process is represented by communication, planning, modeling, construction and deployment phases and Explain what is happening in these five phases.
6. Write a short note on Reverse Engineering and Explain about User Interfaces Reverse Engineering.
7. Explain Software Process and Project Metrics
8. Explain the mechanism of Software Project Estimation?
9. Explain COCOMO Model of Software Equation.
10. Make PERT chart for **web-designing application design and development (for example [www.subodhpgcollege.com](http://www.subodhpgcollege.com))** with reference to Project cost **16,00,000 INR** and timing 6 month.

**S. S. Jain Subodh PG (Autonomous) College, Jaipur**

**M.Sc. (IT) - III Semester Python Programming**

**(PMIT-302) Assignment**

**Attempt any two questions.**

**Unit- I**

1. Explain different loops available in python along with suitable examples.
2. Discuss various conditional statements along with suitable examples in python.

**Unit- II**

3. Differentiate between list and tuple using suitable examples
4. Explain the set data structure in python. Also explain various mathematical operations available in python.

**Unit- III**

5. What do you understand by Regular Expressions in python? Explain in detail.
6. Explain the concept of Exception Handling available in Python.

**Unit- IV**

7. Explain the following terms:
  - a) Classes and Objects
  - b) `__init__()` method
  - c) Self-keyword
8. What do you understand by Inheritance? Explain different types of inheritances available in python?