

PGDLAN

Post Graduate Diploma
in
Library Automation and Networking
Assignments
For January 2023 and July 2023 Sessions



Faculty of Library and Information Science
School of Social Sciences
Indira Gandhi National Open University
Maidan Garhi New Delhi-110068

DATES FOR SUBMISSION OF ASSIGNMENTS

FOR January SESSION 30th September 2023

FOR July SESSION 31st March 2024

WHERE TO SUBMIT THE ASSIGNMENTS

**Kindly submit your assignments at the concerned Study
Centre/TLC within the due dates as mentioned above**

Contents	Page No.
Instructions for Assignments	4
MLI-001 : Introduction to Computers	7
MLI-002 : Library Automation	10
MLI-003 : Information Systems	12
MLI-004 : Networking and Internet Technology	14
MLI-005 : Internet Resources	16
MLI-006 : Content Development	18
MLI-007 : Programming	20
Part – A : C++	
Part – B : Visual Basic	
Part – C : Java	

INSTRUCTIONS FOR ASSIGNMENTS

As a part of PGDLAN Programme, each candidate has to do two Tutor Marked Assignments (TMAs), in all the seven courses except course MLIP – 008: Project. These TMAs comprise theoretical as well as practical assignments.

Assignments carry 20% weightage in the continuous evaluation process of a course. The term-end examinations carry 80% weightage.

The assignments will be evaluated by the Counsellors at the TLCs and the respective weightage of marks will be added to their percentage of marks obtained at the term-end examination. Each candidate will have to complete assignments in order to appear in the term-end examination. Candidates are, therefore, advised to take assignments seriously and submit them in time.

INSTRUCTIONS FOR TUTOR MARKED ASSIGNMENTS

- 1) The validity of the assignment is ONE YEAR. Those who take admission in January session have to attempt the assignments of January session only. If they fail to submit their assignments before the due date of the particular session, they are supposed to attempt the fresh set of assignments of subsequent January session (e.g. if a student of January 2023 session fails to submit her/his assignments till 30th September 2023, s/he will have to attempt the fresh assignments of January 2024 session). Similarly, those who take admission in July session have to attempt the assignments of July session only. If they fail to submit their assignments before the due date of the particular session, they are supposed to attempt the fresh set of assignments of subsequent July session (e.g. if a student of July 2023 session fails to submit her/his assignments till 31st March 2024, s/he will have to attempt the fresh assignments of July 2024 session).
- 2) Write your Enrolment Number, Name, Full Address and Date of Despatch at the top right-hand corner of the first page of your answer sheet.
- 3) Write the Programme Title, Course Title, Assignment Number, Code and Place of the Study Centre (TLC) on the left-hand corner of the first page of your answer sheet.

The top of the first page of your answer sheet for each assignment should be as follows:

Programme Title	Enrolment No.
Course Code & Title	Name
Assignment Number	Address
Study Centre/TLC (Code)
Study Centre/TLC
Place	Date

Note: Candidates are required to follow this format strictly otherwise the assignments will not be evaluated.

- 4) Your answer sheet should be complete in all respects. Make sure that you have answered all the questions in assignments before you submit them. Incomplete answer sheets will lead to poor marks.
- 5) As far as possible students are advised to give the relevant points from the course material and elaborate their answers and explanations in their own language instead of reproducing the language of the course materials.
- 6) You are advised not to copy from the study material while attempting the assignments. In case it is found that the assignments have been copied from study material, you will be awarded zero marks.
- 7) Avoid copying from the answer sheets of other students. If copying is noticed, the assignments of such students will be rejected.
- 8) Use only foolscap size paper for your answers, ordinary writing paper, neither too thick nor too thin, will do.
- 9) Leave 3" margin on the left and at least 4 lines in between each answer in an assignment. This will enable your Counsellor to write useful comments in appropriate places. Write question number for each answer.
- 10) The Coordinator of your Study Centre/TLC will return the evaluated assignments to you. This will also include a copy of assessment sheet containing global comments of the evaluator on your performance in the assignments. This will enable you to improve in your future assignments as well as in the term-end examinations.
- 11) The Tutor Marked Assignments should be sent to the Coordinator / Programme In-charge of the Study Centre/TLC allotted to you.

PRACTICAL ASSIGNMENTS

Assignment No. 2 of each course (TMA – P), which is for practical, is to be carried out at Study Centres/ TLCs. These have to be submitted/shown to the concerned counsellors.

MLI-001: Introduction to Computers
TMA – Theory

Coverage:
Course: Introduction to Computers
Blocks: 1 to 3
Units: 1 to 9

Course Code: MLI-001
Assignment Code: AST/TMA-T/Jan. & July 2023

Total Marks: 50

- I) *Answer any two of the following in not more than 1000 words each*
- 1) Describe memory hierarchy? Explain the types of memory hierarchy. (15)
 - 2) What are the technical features of Linux? Discuss its Kernel and its modules. (15)
 - 3) Discuss the impact of information society on information profession. (15)
- II) *Answer any four of the following in not more than 500 words each*
- 1) Describe the functions of system software. (5)
 - 2) Explain the types of charts in spread sheet. (5)
 - 3) Differentiate between fibre optic cables and microwave. (5)
 - 4) Discuss the input-output process of a computer. (5)
 - 5) What is secondary storage? Why is it needed? (5)
 - 6) Highlight the factors that determine the arrival of information society. (5)

**MLIL-001: Introduction to Computers
TMA – Practical**

Coverage:

Course: Introduction to Computers

Blocks: 1 to 3

Units: 1 to 9

Course Code: MLIL- 001

Assignment Code: AST/TMA–P/ Jan. & Jul.2023

Total Marks: 50

General Instructions for Practical Assignment:

- i) Documents, data, database, etc. to work on for the practical assignments will be provided by the Counsellor/Practical Supervisor in the Study/Tele Learning Centre.
 - ii) You are required to do the practical assignment in the Study/Tele Learning Centre. Evaluation of the assignment will be done by the Counsellor/Practical Supervisor on the spot.
 - iii) Make Screen Captures for all the answers and save them in one file. The Counsellor/Practical Supervisor will evaluate these screen captures and give marks accordingly.
 - iv) All questions are compulsory.
-

- I) Perform the following activities: (10)
 - A) DOS:**
 - i) Display Directory Structure
 - ii) Clear Screen
 - iii) Display the content of file “mydosfile.bat”
 - B) WINDOWS:**
 - i) Install a new printer and make it shareable
 - ii) Display the calculator in scientific mode
 - iii) Display system information of your computer
 - iv) Move the task bar from the bottom of the
 - C) UNIX:**
 - i) Change the working directory to the root directory
 - ii) Display the name of all users logged in currently
 - iii) Use the PS command and try to kill any process owned by you
- 2) Prepare a MS Word document containing both text and table; also add hyperlinks, pictures, clipart and word-Art to it. (10)

- 3) Prepare a Power Point presentation consisting of 08 slides having text and animation. Apply different design templates, various colour schemes, charts and 9 slide transition effects for each slide. (10)
- 4) Create a file in MS-EXCEL containing names of 20 students with their marks in five subjects. Add a bar-chart to present this data. (10)
- 5) Prepare a database in MS-Access of twenty users for circulation section of a Library. (Details will be provided by the Counsellor/ Supervisor). (10)

MLI-002: Library Automation
TMA-Theory

Coverage:

Course: Introduction to Computers

Blocks: 1 to 4

Units: 1 to 14

Course Code: MLI- 002

Assignment Code: AST/TMA–T/ Jan. & Jul.2023

Total Marks: 50

- I) Answer **any two** of the following in **not more than 1000 words** each.
- 1) Discuss the parameters for evaluating a library automation software package. (15)
 - 2) What are the different formats and standards in cataloguing? Describe MARC 21 in detail. (15)
 - 3) Explain the functions of circulation system in an automated environment. (15)
- II) Answer **any four** of the following in **not more than 500 words** each.
- 1) Discuss the parameters to be considered in selecting a bibliographic database for online search. (5)
 - 2) Define retrospective conversion. Discuss the advantages and disadvantages of in-house retrospective conversion by direct data entry. (5)
 - 3) Explain the steps to be followed for indexing articles of the serials in an automated environment. (5)
 - 4) Identify some of the national and international agencies that offer electronic clipping service. Discuss any two of them in brief. (5)
 - 5) Explain different components of Expert Systems. (5)
 - 6) Describe Management Information Systems (MIS). (5)

MLIL-002: Library Automation

TMA-Practical

Coverage
Course: Library Automation
Blocks: 1 to 4
Units : 1 to 14

Course Code: MLIL-002
Assignment Code: AST/TMA-P/Jan. & July 2023

Total Marks: 50

General Instructions for Practical Assignment:

- i) Documents, data, database, etc. to work on for the practical assignments will be provided by the Counsellor/Practical Supervisor in the Study/Tele Learning Centre.
 - ii) You are required to do the practical assignment in the Study/Tele Learning Centre. Evaluation of the assignment will be done by the Counsellor/Practical Supervisor on the spot.
 - iii) Make Screen Captures for all the answers and save them in one file. The Counsellor/ Practical Supervisor will evaluate these screen captures and give marks accordingly.
 - iv) All questions are compulsory.
-

- 1) Write down the steps involved in (a) checking duplicate (b) preparing supply orders (c) merging acquisition record with OPAC with the help of a library software package. (10)
- 2) Add 10 publishers in the Master Database and generate a list thereof. (10)
- 3) Generate Barcode Labels after entering the data for books and theses (minimum 10 entries each). (10)
- 4) Create a database for 5 departmental budget heads and allocate Rs.1 lakh each for every head. Generate reports for the list of budget heads and the amount allocated. (10)
- 5) Create a database of 10 national and international periodicals. Generate reports for the list of national and international journals by subject. (10)

MLI-003: Information Systems
TMA-Theory

Coverage
Course: Information Systems
Blocks: 1 to 4
Units: 1 to 14

Course Code: MLI-003
Assignment Code: AST/TMA-T/ Jan. & July 2023

Total Marks: 50

- I) Answer **any two** of the following in not more than 1000 words each
- 1) Define the concept 'information retrieval system'. Describe the models of information retrieval. (15)
 - 2) Discuss the structure, design and development of a Management Information System. (15)
 - 3) Define Expert Systems. Describe in detail their structure and major components. (15)
- II) Answer **any four** of the following in not more than 500 words each.
- 1) Describe the role of a system analyst. (5)
 - 2) Discuss the major issues involved in developing digital libraries. (5)
 - 3) Briefly describe Boolean search. (5)
 - 4) Explain the steps involved in system design process. (5)
 - 5) Explain the concept of key in data management. (5)
 - 6) Describe the basis of artificial intelligence and the key areas of its application. (5)

MLIL-003: Information Systems
TMA-Practical

Coverage
Course: Information Systems
Block 1 to 4
Units: 1 to 14

Course Code: MLIL-003
Assignment Code: AST/TMA-P/ Jan. & Jul.2023

Total Marks: 50

General Instructions for Practical Assignment:

- i) Documents, data, database, etc. to work on for the practical assignments will be provided by the Counsellor/Practical Supervisor in the Study/Tele Learning Centre.
 - ii) You are required to do the practical assignment in the Study/Tele Learning Centre. Evaluation of the assignment will be done by the Counsellor/Practical Supervisor on the spot.
 - iii) Make Screen Captures for all the answers and save them in one file. The Counsellor/ Practical Supervisor will evaluate these screen captures and give marks accordingly.
 - iv) Attempt the questions using SQL commands or MS – Access.
 - v) All questions are compulsory.
-

1. Design a blank database “LIBRARY” using MS-ACCESS and add to it the following tables: (15)
 - i. JOURNALS
 - ii. VENDORS

Add the following fields in the ‘JOURNAL table in the ‘Design View’

- a) JOURNAL_ID Auto Number
- b) JOURNAL_TITLE Text 255 Null Not Allowed
- c) JOURNAL_SPONSOR Text 255 Null Not Allowed

Now add 15 records in it using Data Sheet View.

2. Add the following fields in the Table ‘SUBJECT’ – SUBJECT_ID, SUBJECT_NAME, AUTHOR_ID.
Add 15 records in the table. (15)
3. Make a relationship of JOURNAL_ID field in VENDORS table to the JOURNALS table using ‘Look Up Wizard’ in Design View. (5)
4. Design E-R diagram for the database ‘DOCUMENTS’ to show relationship among the tables.
Add 15 records in VENDORS table in Data Sheet View. (10)

Add 15 records in VENDORS table in Data Sheet View. (10)

MLI-004: Networking and Internet Technology
TMA-Theory

Coverage

Course Code: MLI-004

Course: 004 (Networking and Internet Technology) Assignment Code: AST/TMA-T/ Jan. & Jul.2023

Blocks: 1 to3

Units : 1to 14

Total Marks: 50

i) **Answer any two of the following in not more than 1000 words each**

- 1 Describe and categories the computer networks. Also, discuss the network topologies with suitable diagrams. (15)
- 2 Define resource sharing. Also examine the IFLA Guidelines for resource sharing. (15)
- 3 Define search engine. Enumerate various categories of search engines and explain the functioning of a search engine in detail. (15)

ii) **Answer any four of the following in not more than 500 words each**

- 1 Write brief note on the national information policy on library and information systems. (5)
- 2 Explain the criteria used by internet evaluation sites. (5)
- 3 Describe three tier architecture of client-server with the help of a diagram. (5)
- 4 Make a comparative analysis of internet2 and internet3. (5)
- 5 Define computer viruses and how can they be avoid viruses. (5)
- 6 Explain various advantages of extranet. (5)

MLIL-004: Networking and Internet Technology
TMA-Practical

Coverage

Course Code: MLIL-004

Course: 004 (Networking and Internet Technology) Assignment Code: AST/TMA-P/ Jan. & Jul.2023

Blocks: 1 to3

Units: 1to 14

Total Marks: 50

General Instructions for Practical Assignment:

- i) Documents, data, database, etc. to work on for the practical assignments will be provided by the Counsellor/Practical Supervisor in the Study/Tele Learning Centre.
- ii) You are required to do the practical assignment in the Study/Tele Learning Centre. Evaluation of the assignment will be done by the Counsellor/Practical Supervisor on the spot.
- iii) Make Screen Captures for all the answers and save them in one file. The Counsellor/Practical Supervisor will evaluate these screen captures and give marks accordingly.
- iv) All questions are compulsory.

-
- | | | |
|---|---|------|
| 1 | Use Google Chrome and search Five Titles on “Library Classification” in IndCat. Explain the types of searches available in IndCat. | (10) |
| 2 | Create an e-Mail ID using Gmail, create one folder “Important Communication” and Two sub-folder in it (Internal and External) and organize your emails as “Internal” and “External” using folder options. | (10) |
| 3 | Identify websites of the important Indian library networks (minimum 3) and highlight their common services. | (10) |
| 4 | Evaluate the various types services offered by the ERNET. | (10) |
| 5 | Search the term “Library and Information Science as Career” using Boolean Operators (AND, OR, NOT) and compare the search results, also provide the screenshots of the respective search. | (10) |

**MLI-005: Internet Resources
TMA-Theory**

Coverage
Course: Internet Resources
Blocks: 1to2
Units: 1to 7

Course Code: MLI-005
Assignment Code: AST/TMA-T/ Jan. &Jul.2023

Total Marks: 50

- I) Answer *any two* of the following in not more than 1000 words
- 1) What are the different types of search tools and facilities available on the Internet? Describe their advantages and disadvantages. (15)
 - 2) Define Internet information resources. Enlist the different categories of such resources. Briefly describe any two categories with examples. (15)
 - 3) Describe the steps in the process of evaluating information resources. (15)
- II) Answer *any four* of the following in not more than 500 words each.
- 1) What are the important reference sources available on the Internet? (5)
 - 2) Discuss multimedia, hypermedia and hyper-text. (5)
 - 3) Define the Electronic Books, Online Book Selling and Print-on Demand. (5)
 - 4) What are the criteria used to judge the suitability of an information source? (5)
 - 5) Describe the technical infrastructure required for a digital library. (5)
 - 6) Discuss the Online Database Connectivity (ODBC). (5)

**MLIL-005: Internet Resources
TMA-Practical**

Coverage
Course: Internet Resources
Blocks: 1to2
Units: 1to 7

Course Code: MLIL-005
Assignment Code: AST/TMA-P/ Jan. &Jul.2023

Total Marks: 50

General Instructions for Practical Assignment:

- i) Documents, data, database, etc. will be provided by the Counsellor/ Practical Supervisor in the Study/Tele Learning Centre to work on practical assignment.
 - ii) You are required to do the practical assignment in the Study/Tele Learning Centre.
 - iii) Make Screen Captures for all the answers and save them question wise in one file. Wherever necessary also save the output in MS Word. The Counsellor/ Practical Supervisor will evaluate these Screen Captures/ MS Word files and give marks accordingly.
 - iv) All questions are compulsory.
-

1. Browse the electronic version of College & Research Libraries (C&RL) (25)
 - (a) List its different volumes along with their URLs. Published during last 3 years
 - (b) Browse its archive covering the last 2 years publication.
 - (c) Select any ten articles in any issues and try to download them in one MS word file
 - (d) Select any five data analysis images from the latest issue and save them in one MS word file
 - (e) Save the 20 articles in one Folder titled "C&RL Editorial Items"
- (a) Browse the website of National Testing Agency (NTA), India. (25)
 - (b) Find out the objectives and functions of NTA
 - (c) List out the NTA examinations
 - (d) List out the Governing Body of NTA
 - (e) Downloads previous 2020 year exam papers of LIS
 - (f) List out the exams domains which conduct by NTA
2. (25)
 - (a) Calculate any Five International Standard Book Number
 - (b) List the courses in LIS analysis on MOOCs.
 - (c) Make the selected websites as favorites or book mark them and save them in a folder named "National Library in Delhi"
 - (d) Open any five NITs library websites and identify library software
 - (e) List out any five Commercial publishers which related to Library and Information Science

MLI-006: Content Development
TMA-Theory

Coverage
Course: Content Development
Blocks: 1 to2
Units: 1 to10

Course Code: MLI-006
Assignment Code: AST/TMA-T/ Jan. & Jul.2023

Total Marks: 50

I) Answer any two of the following in not more than 1000 words each.

1. Identify and discuss the varieties of documents available over Internet. (15)
2. Define Knowledge Management (KM). Discuss need of KM and various models of its management. (15)
3. Critically evaluate techniques of content organisation. (15)

II) Answer any four of the following in not more than 500 words each.

- 1 Describe the steps for conducting relational analysis. (5)
- 2 Critically evaluate criteria in content development. (5)
- 3 Define Metadata, Describe Dublin Core Metadata Initiative (DCMI). (5)
- 4 Write short note on the Web Indexing methods. (5)
- 5 Discuss web content accessibility guidelines. (5)
- 6 Explain the importance of patents. (5)

MLIL-006: Content Development
TMA-Practical

Coverage
Course: Content Development

Course Code: MLIL-006
Assignment Code: AST/TMA-P/ Jan. & Jul.2023

Blocks: 1 to2
Units: 1 to10

Total Marks: 50

General Instructions for Practical Assignment:

- i) Documents, data, database, etc. to work on for the practical assignments will be provided by the Counsellor/Practical Supervisor in the Study/Tele Learning Centre.
- ii) You are required to do the practical assignment in the Study/Tele Learning Centre. Evaluation of the assignment will be done by the Counsellor/Practical Supervisor on the spot.
- iii) Make Screen Captures for all the answers and save them in one file. The Counsellor/ Practical Supervisor will evaluate these screen captures and give marks accordingly.
- iv) All questions are compulsory.

-
- 1 Analyse the content of the five Indian Institute of Technology (IIT) libraries website using qualitative (relational) analysis. (10)
 - 2 Identify types of information sources for a university library. Assign Dublin Core metadata elements to at-least five entries under each category. (10)
 - 3 Import any ten titles from the Library of Congress on-line catalogue using Z39.50 protocol. Prepare bibliographic record for any five different kind of information sources using MARC structure. (15)
 - 4 Develop a html web page for IGNOU LIS Programmes (PhD, MLIS, BLIS, PGDLAN, CLIS) indicating following information. (15)
 - a) Programme overview
 - b) Duration
 - c) Minimum and Maximum
 - d) Course Fee:
 - e) Age limit
 - f) Eligibility
 - g) Examination and Evaluation

MLI-007: Programming
TMA-Theory

Coverage
Course: Programming
Blocks: 1
Units: 1 to 3

Course Code: MLI-007
Assignment Code: AST/TMA-T/ Jan. & Jul.2023

Total Marks: 50

I) Answer any two of the following in not more than 1000 words each.

- 1) Draw a flow chart to show the issue of books and non-issue of reference books in a library. (15)
- 2) What is a pseudocode? Write a pseudocode for accepting three numbers and find the maximum. (15)
- 1) What is a system? Describe the characteristics of systems. (15)

II) Answer any four of the following in not more than 500 words each.

- 1) A library is an open system. Explain. (5)
- 2) What is the role of library professionals in system analysis? (5)
- 3) Write an algorithm which accepts 5 numbers and sort them in ascending order. (5)
- 4) Explain the different strategies available for problem solving. (5)
- 5) Define 'Data Flow Diagram'. Explain the different elements of DFD. (5)
- 6) Explain the different symbols used in a flow chart with examples. (5)

MLIL-007: Programming
TMA-Practical

Coverage
Course: Programming
Blocks: 2 to 4
Units: 4 to 24

Course Code: MLIL-007
Assignment Code: AST/TMA-P/ Jan. & Jul.2023

Total Marks: 50

General Instructions for Practical Assignment:

- i) Compilers to work on for the practical assignment will be provided by the counsellor/practical supervisor in the Study/TeleLearning.
 - ii) You are required to do the practical assignment in the Study/Tele Learning Centre. Evaluation of the assignment will be done by the Counsellor/Practical Supervisor on the Spot.
 - iii) Attempt either Group A (C++) or Group B (Visual Basic) or Group C (Java).
 - iv) For Each C++ and Java program, students are required to design a class construct.
 - v) All questions are compulsory.
-

Group A: (C++)

- 1) Write a menu driven program for following: a) display a Fibonacci series b) compute Factorial of a number c) to check whether a given number is odd or even. d) To check whether a given string is palindrome or not. (10)
- 2) Write a Program to find sum of elements in a given array. (5)
- 3) Write a program to create an array of 10 integers. Accept values from the user in that array. Input another number from the user and find out how many numbers are equal to the number passed, how many are greater and how many are less than the number passed. (10)
- 4) Write a program that will prompt the user for a list of 5 prices. Compute the average of the prices and find out all the prices that are higher than the calculated average. (10)
- 5) Design a class named Car, having registration number, model and engine as its private members. Here engine is an object of a class called Engine with the private members: Chassis number and make. Define a suitable constructor of Car and override to String () Method to print the details of a car. Assume appropriate data types for the instance members of the classes. Write a Java program to test the above class. (10)

- 6) Write a program that given an array arr[] of size N-1 with integers in the range of [1, N], the task is to find the missing number from the first N integers. (5)

(OR)

Group B: (Visual Basic)

- 1) Enter a list of positive numbers terminated by zero. Find the sum and average of these numbers.(10)
- 2) A person deposits Rs. 1000 in a fixed account yielding 5% interest. Complete the amount in the account at the end of each year for 10 years. (10)
- 3) Read n numbers. Count the number of negative numbers, positive numbers in list. (10)
- 4) Read n numbers. Count the number of negative numbers, positive numbers and zeroes in the list. Use arrays. (10)
- 5) Read a two dimension array. Find the subtraction of two 2D Array. (10)

Group C: (Java)

- 1) Write a Java program to read the number from standard input. (5)
- 2) Write a Java Program to Print Star Pascal's Triangle. (5)
- 3) Write a Java Program for Decimal to Binary Conversion. (5)
- 4) Write a Java Program to Create a Class and Object. (5)
- 5) Write a Java Program to show Method Overloading. (5)
- 6) Write a Java Program to show Method Overriding. (5)
- 7) Write a Java Program to Show Use of This Keyword in Class. (5)
- 8) Write a Java Program to Show Usage of Main () method. (5)
- 9) Write a Java Program For Binary Search. (5)
- 10) Write a Java Program to Add Two Matrices. (5)