Post Graduate Diploma
in
Library Automation and Networking

Assignments
For January 2016 and July 2016 Sessions

ignou
THE PEOPLE'S
UNIVERSITY

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 2016**

FOR JULY SESSION   **31st March 2017**

WHERE TO SUBMIT THE ASSIGNMENTS

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

CONTENTS

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 Study Centres/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 2016 session fails to submit his/her assignments till 30th September 2016, he/she will have to attempt the fresh assignments of January 2017 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 2016 session fails to submit his/her assignments till 31st March 2017, he/she will have to attempt the fresh assignments of July 2017 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   ...………………………...

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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 Code: MLI- 001**
Course: Introduction to Computers   **Assignment Code: AST/TMA–T/Jan. &Jul.2016**
Blocks: 1 to 3
Units: 1 to 9

                                                             Total Marks: 50

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

   1)   Define data communication. Explain the different elements of generic model of
       communication with the help of a diagram.   (15)

   2)   "System software is designed to act as an interface between users or their
       application programmes and the computer system itself". Discuss.   (15)

   3)   What are the components of a Linux system? Explain Linux Kernel and its
       modules.   (15)

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

   1)   Discuss the benefits of secondary storage over the primary memory.   (5)

   2)   Differentiate between sequential and direct storage devices.   (5)

   3)   Explain the advantages of Windows operating system over DOS operating
       system.   (5)

   4)   Discuss the concept of Information Society.   (5)

   5)   Differentiate between network operating system and distributed operating system. (5)

   6)   Explain the steps in creating graphs in MS-Excel.   (5)

MLIL-001: Introduction to Computers
TMA – Practical

Coverage: **Course Code: MLIL- 001**
Course: Introduction to Computers   Assignment Code: AST/TMA–P/ Jan. &Jul.2016
Blocks: 1 to 3
Units: 1 to 9   **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)   Perform the following activities: (10)

   A) WINDOWS:

    (i)   List the icons in My Documents to Thumbnails
    (ii) Find out free disk space in local disk (C:)
    (iii) Set the calculator to scientific mode
    (iv) Create a screen saver that has 'PGDLAN 2016' scrolling on the screen
    (v)   Create a folder VIRTUAL LIBRARY on your desktop

   B) UNIX:
    (i)   Activate UNIX manual for *'ls'* command
    (ii) Terminate one of the running processes using 'kill' command
    (iii) Create a new directory PGDLAN in your home directory
    (iv) Move the directory to other directory and rename it to MLIS
    (v)   Remove the directory MLIS

2)   Write a short-letter, using Wordpad or Notepad requesting for a change of your study centre.   (10)

3)   Prepare a Power Point presentation consisting of 08 slides having text, chart and table. Apply different design templates and transition sounds for each slide.   (10)

4)   Create a file in MS-EXCEL containing enrolment data of students in PGDLAN Program from 2010-2015.Add a graph to present this data.   (10)

5)   Prepare a database in MS-Access of twenty books in a Library. (Details will be provided by the Counsellor/ Supervisor).   (10)

MLI-002: Library Automation

TMA-Theory

I)   Answer *any two* questions in *not more than 1000 words each*.

    1)   Discuss the process of planning for library automation.   (15)

    2)   Discuss the need for a format in cataloguing. Explain the structure of a MARC

        record with examples.   (15)

    3)   Describe the provision of CAS in different modes in libraries.   (15)

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

    1)   Describe the trends in library automation.   (5)

    2)   Describe the features of an automated circulation control system.   (5)

    3)   Explain the search features of an OPAC.   (5)

    4)   Discuss in brief the document profile and user profile in SDI.   (5)

    5)   Explain the criteria of evaluating a bibliographic database.   (5)

    6)   Discuss the use of ICT in reference service.   (5)

MLI-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. & Jul. 2016

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.**

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1)   Create a database **Request for New Journals to be Subscribed**. Enter 5 records in it.   (20) Select any two titles for approval.

2)   Generate reports for list of items suggested, approved and rejected.   (15)

3)   Create a database of 10 New Library Members and (a) issue one book each to three of these members and (b) reserve one book each to two of the members   (15)

NB: The questions are based on the software package SOUL, which will be made available to you at the Study/Tele Learning Center.

MLI-003: Information Systems
TMA-Theory

Coverage   **Course Code: MLI-003**
Course: Information Systems   **Assignment Code: AST/TMA-T/ Jan. &Jul. 2016**
Blocks: 1 to 4
Units: 1 to 14   **Total Marks: 50**

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

    1)   Explain the concepts 'system' and 'system approach'.   (15)

    2)   Discuss the structure, design and development of a Management
        Information System.   (15)

    3)   What is a digital library? Discuss the major issues and challenges
        involved in its development.   (15)

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

    1)   Explain the concept of 'file organisation'.   (5)

    2)   Describe the different types of information system.   (5)

    3)   Describe briefly different techniques of Boolean search.   (5)

    4)   Explain the criteria for evaluation of information retrieval systems. (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)

MLI-003: Information Systems
TMA-Practical

Coverage   **Course Code: MLIL-003**
Course: Information Systems   **Assignment Code: AST/TMA-P/ Jan. & July 2016**
Blocks: 1 to 4
Units: 1 to 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)   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.   (5)

 5)   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: Networking and Internet   **Assignment Code: AST/TMA- T/ Jan. &Jul.2016**
          Technology
Blocks: 1 to 3
                                                      Total Marks: 50

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

  1)   Discuss various components of ISDN devices.   (15)

  2)   How is ATM architecture organised? Discuss.   (15)

  3)   What are basic objectives of a resource sharing network? Explain the
       various components of such a network.   (15)

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

  1)   Differentiate between Internet, Intranet, and Extranet.   (5)

  2)   What is Storage Area Network (SAN)?   (5)

  3)   What are Meta search engines   (5)

  4)   Explain how Firewall works   (5)

  5)   What is a search engine? Discuss the different categories of search
       engines.   (5)
  6)   Describe the features of different standards used for creating web
       documents.   (5)

MLI-004: Networking and Internet Technology
TMA-Practical

Coverage   **Course Code: MLIL-004**

Course: Networking and Internet   **Assignment Code: AST/TMA-P/ Jan. &Jul.2016**
        Technology

Blocks: 1 to 3

Units: 1 to 13   **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.

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1)   Configure your system with :
    a)   Microsoft network settings   (5)
    b)   File & print sharing under windows environment.   (5)

2)   Do the following on your system
    a)   Find out the processor speed and the amount of RAM that your computer has.   (5)
    b)   Check out the current video resolution and video adapter of your computer.   (5)

3)   Identify different components of the following URL and E-mail account.
    a)   http://ignou.ac.in/ignou/studentzone/adminssionanouncement/1   (3)
    b)   internationaldivision@ignou.ac.in   (3)

4)   Create two e-mail accounts on Gmail. Using Google DOC facility share any file. Join the list forum of NCSI, IISC, Bangalore using the newly created account.   (10)

5)   Find out the following:
    a)   Directory of Open Access Journal (DOAJ) on the web and list number of journals covered and number of full text articles. (as on date).   (6)
    b)   OAISTER database from OCLC website.   (4)
    c)   Library of congress online catalogue and search books on Library Management.   (4)

MLI-005: Internet Resources
TMA-Theory

Coverage   **Course Code: MLI-005**
Course: Internet Resources   **Assignment Code: AST/TMA-T/Jan.& Jul.2016**
Blocks: 1to 2
Units: 1 to 7   **Total Marks: 50**

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

1) Define meta resources and briefly describe some of the important meta resources available on the Internet.   (15)
2) What do you understand by Internet information resources? Explain the subscription and access points provided by publishers to various Internet based electronic resources.   (15)
3) Explain the need to evaluate information resources available on the Internet. Describe the steps involved in the process of their evaluation.   (15)

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

1) How can electronic resources be preserved in the digital world?   (5)

2) Describe the advantages and disadvantages of search tools available on the net.   (5)

3) How will you keep up-to-date with the web resources in the field of social sciences?   (5)

4) What are the types of resources available in the area of humanities on the Internet? Describe any one of them in detail.   (5)

5) Discuss with examples the Campus Wide Information System (CWIS) available in the field of sciences. Illustrate your answer with the help of suitable examples.   (5)

6) What do you understand by the term "Interoperability"?   (5)

MLIL-005: Internet Resources
TMA-Practical

Coverage   **Course Code: MLIL-005**
Course: Internet Resources   **Assignment Code: AST/TMA-P/Jan.&Jul.2016**
Blocks: 1to2
Units: 1 to 7   **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.

I)
- Find out and list the names of the LIS journals published by SAGE Publisher.
- Download the latest or available TOCs of all the identified journals and save the output in MS Word document.   (10)

II)
- Visit the relevant websites to find out the writings of Jawahar Lal Nehru and Mahatma Gandhi.
- Make a list of the works by Jawahar Lal Nehru along with their URLs.
- Make a list of the works by Mahatma Gandhi along with their URLs.   (10)

III)
- Use the search engine Google and search the web for "Foreign visits of PM Narendra Modi from 2014 to 2015".
- Open any five websites of your choice and write down their URLs.
- Make the selected websites as favourites or book mark them and save them in a folder named "Foreign Visits of PM".   (10)

IV)
- Browse the website for electronic version of Hindustan Times newspaper.
- Name its different editions.
- Open Delhi edition.
- Save all the front page news in MS Word file.   (10)

V)

- Name at least five LIS associations and write down their URLs.
- Find out the names of their publications.
- Write the type of membership they provide along with the membership fee.
- Mention the name(s) of award(s) or fellowship(s) given by them.   (10)

MLI-006: Content Development
TMA-Theory

Coverage   **Course Code: MLI-006**
Course: Library Automation   **Assignment Code: AST/TMA-T/Jan & July2016**
Blocks: 1 to 4
Units: 1 to 14   **Total Marks: 50**

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

   1)   Describe most commonly used graphical file formats and their advantages and
        disadvantages.   (15)

   2)   Discuss the importance of websites for libraries. Describe the functions of
        different navigational tools for web searching.   (15)

   3)   Discuss the parameters for evaluating web documents.   (15)

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

   1)   Discuss the advantages of multimedia and the characteristic features of text
        and image files.   (5)

   2)   What is Meta data? Describe the Dublin Core data elements with examples.   (5)

   3)   Describe the functional model of Knowledge Management Systems.   (5)

   4)   Discuss the contribution of Electronic Text Encoding and Interchange
        (TEI)in content development.   (5)

   5)   Discuss the essential features of HTML, XML and DHTML.   (5)

   6)   Explain the concept and usefulness of subject gateways.   (5)

TMA – Practical

Coverage	Course Code: MLIL-006

Course: Library Automation   Assignment Code: AST/TMA-P/Jan. & July 2016
Blocks: 1 to 4
Units: 1 to 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)   Prepare a website on the works of Rabindranath Tagore.   (20)

2)   Display the following using HTML tags.   (15)

     i)   IGNOU
         IGNOU, Indira Gandhi National Open University is located at New Delhi.
     ii)   DRTC
         DRTC, Documentation Research and Training Centre is located at Bangalore.

3)   Prepare metadata for 5 web document available in PDF format using DC tags. (15)

MLI-007: Programming
TMA-Theory

Coverage   **Course Code: MLI-007**
Course: Programming   **Assignment Code: AST/TMA-T/ Jan. &Jul.2016**
Block: 1
Units: 1 to 3   **Total Marks: 50**

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

1) Draw a flow chart for acquisition of books in a library.   (15)

2) Write an algorithm to accept a that accepts an integer 'n' as input and compute the square of it. (Note : n>D. Use appropriate controls on the form)   (15)

3) Draw a flow chart and write an algorithm that accepts any character or number and arrange in ascending order by their ASCII value   (15)

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

1) Explain different skills that are expected of a system analyst.   (5)
2) Briefly describe the stages that are involved   in system development life cycle.   (5)

3) Describe the factors involved in decreasing the efficiency of a program.   (5)

4) What is a system? Explain the different ways of its classification.   (5)

5) Write a short note on object oriented programming languages.   (5)

6) Explain the points to be considered in arranging various elements in program structure.   (5)

MLI-007: Programming

TMA-Practical

Coverage   **Course Code: MLIL-007**
Course: Programming   **Assignment Code: AST/TMA-P/Jan. &Jul.2016**
Blocks: 2 to 4
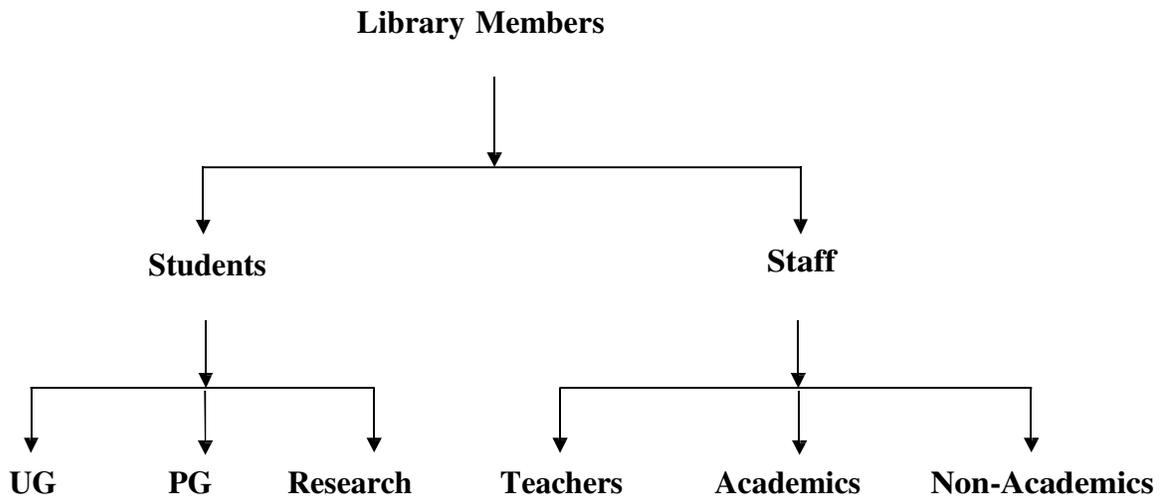**Units: 4 to 24**   **Total Marks: 50**

General Instructions for Practical Assignment:

i)   Compilers to work on for the practical assignment will be provided by the counselor/practical supervisor in the Study/Tele Learning.

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)   Design and implement the following class hierarchy in C++:   (20)

Library Members

Students   **Staff**

UG   PG   Research   Teachers   Academics   Non-Academics

Your implementation should include:

a) Member variables

b) Constructor and Destructor

c) A member function that can display the names of all in a specific category of members

2) Create a database of the following items of derived class using C++: (10)

Name of the Journal
Frequency of the
Journal Country of
Publication Name of
the Publisher Price of
the Journal ISSN of the
Journal

3) Write a program to calculate the overdue charges on late returning books in a library. Use the following data for the calculation of overdue charges: (10)

No. of days	Amount to be charged
< 30	No fine
31-45	Re 1/day
46-60	Rs 2/day
61-90	Rs.3/day
> 90	Rs 500 + Rs. 5/day

4) Write a program to find out the lowest and the highest prices amongst seven books. Print the lowest and the highest prices with appropriate message. (10)

OR
Group B: (Visual Basic)

1) Write a program with the following table using appropriate VB elements. The data provided in second column of the table are not exactly related to data in first column. The exact match is: "1 = d; 2 = c; 3 = a; 4 = e; and 5 = b". When a user clicks on 'submit' button, the program should rearrange the data with exact matches as mentioned above: (15)

Title of the book	Name of the Author
1) Colon Classification	a) Minnie Earl Sears
2) Dewey Decimal Classification	b) Library of Congress
3) Sears List of Subject Headings	c) Melvil Dewey
4) Universal Decimal Classification	d) S R Ranganathan
5) Library of Congress Classification	e) Paul Otlet and Henri la Fontaine

2) Write an event procedure that accepts a string as input and displays the words in it in separate lines. (10)

For example, if input: WE ARE PGDLAN STUDENTS OF IGNOU, then the

Output: WE
AR
E
PGDLAN
STUDENTS
OF
IGNOU

3) Create a form, which takes input base, diameter of a circle and outputs its area in a text box. (10)

4)   Design a menu interface as shown below using the Menu Editor: (15)

F̲ile	**E̲dit**		**V̲iew**	
Add Picture	U̲ndo	Ctrl+Z	T̲humbnails	Ctrl+T
Lo̲cate Picture	R̲edo	Ctrl+Y	F̲ilmstrip	
S̲ave	Discard C̲hanges		Single P̲icture	
Save A̲s	Select All		Shortcuts	
Save All			Show File N̲ames	
Expor				
t P̲rint				

OR

Group C: (Java)

1) Write a Java program to create a base class named *User Class* for a library and derive other categories of users like Students, Academics, Non-Academics, etc. You should use *Super* and *This* keywords at appropriate place in your program. (15)

2) Write a Java program which asks for the name of the first author of a book. Print the first author name according to AACR. For example, if input is Dilip Kumar Mishra, then the output should be Mishra, Dilip Kumar. (20)

3) Write a Java program to prepare a list of books available in a library. (15)

Coverage
Course: 007 (Programming)
Blocks: 2 to 4
Units: 4 to 24

Course Code: MLIL-007
Assignment Code: AST-7/TMA-P/ Jan. &Jul.2016

Total Marks: 50

General Instructions for Practical Assignment:

i)   Compilers to work on for the practical assignment will be provided by the counseller/practical supervisor in the Study/Tele Learning.

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 program that reads a string from the user, then check whether the string is Palindrome or Not.   (5)

2)   Write a program to take an input a number and check whether the number is prime or not.   (10)

3)   Write a program to create a student class which should have the following fields:

Student Name
Student Age
Fee
Total Marks

Create 5 objects of his/her class and test the program, and

i)   Print the contents of all objects   (5)
ii) Sort the student objects in ascending order of their total marks   (10)

4)   Write a program that accepts a string from the user and then reverse it and print it.   (10)

5)   Write a program which accepts sequence of numbers from the user and then arrange all those numbers in descending order.   (10)

OR
Group B (Visual Basic)

1) Write a program to write an Event Procedure to design a Simple Calculator where user type 2 numbers into two different text boxes and the program displays multiplication, addition and subtraction in different text boxes. (10)

2) Create a form with a picture box, use a timer control t6 cycle 10 pictures every second. (10)

3) Create a form having 3 text boxes, the user enters 2 strings in first 2 text boxes and after a button is pressed the concatenated string is shown in the third text box. (10)

4) Create a form, which takes input base, height of a Cylinder and outputs it's Volumes in a text box. (10)

5) Create a form having a text box which takes a number as input and in other text box it outputs reverse of the number after a button is pressed. (10)

OR
Group C (Java)

1) Write a small program that accepts to represent the following pattern: (10)

```
1
1    2
1    2    3
1    2    3    4
```

2) Write a Java program to find the average of 3 numbers. (10)

3) Write a program to count the number of characters in a string. (10)

4) Write a Java program to concatenate two strings. (10)

5) Write a program to accept 10 students name from keyboard in an array and sort them in alphabetical order. (10)