

PGDLAN

**Post Graduate Diploma
in
Library Automation and Networking**

**Assignments
For January 2019 and July 2019 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 2019
FOR JULY SESSION	31st March 2020

WHERE TO SUBMIT THE ASSIGNMENTS

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

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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 2018 session fails to submit her/his assignments till 30th September 2018, s/he will have to attempt the fresh assignments of January 2019 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 2018 session fails to submit her/his assignments till 31st March 2019, s/he will have to attempt the fresh assignments of July 2019 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-1/TMA-T/Jan. & Jul.2019**

Total Marks: **50**

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

- 1) Explain future operating system trends with examples. (15)
- 2) Discuss the Linux Kernel and its modules. Explain the advantages of using Linux operating system. (15)
- 3) Why do we need secondary storage? Discuss the benefits of secondary storage over the primary memory. (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 features of any web browser. (5)
- 3) What do you mean by memory hierarchy? (5)
- 4) Explain the advantages of windows operating system over DOS operating system. (5)
- 5) Discuss the need for automation of libraries. (5)
- 6) Discuss the impact of information society on information profession. (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-1/TMA-P/ Jan. &Jul.2019**

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) DOS: display directory structure, clear screen and display the content of file: mydosfile.bat”
 - B) WINDOWS:
 - (i) Enable Auto-hide taskbar and make all the windows cascade.
 - (ii) Change the background of the desktop and also create a screen saver with your name.
 - (iii) Change the font size to large fonts.
 - (iv) Create a folder PGDLAN and its shortcut on the desktop.
 - (v) Display the calculator in scientific mode.
 - C) UNIX: List the names of the files in your home directory, Display calendar of current month, Display today’s date and time.
 - 2) Prepare a document in MS WORD, with one paragraph and a table having five columns and five rows, using different font size and styles for heading and text. Also insert picture and clipart and apply header/footers. (10)
 - 3) Prepare a Power Point presentation consisting of 8 slides having text and pictures. Add different slide transition effects for each slide. Apply various animation and colour schemes. Also apply slideshow. (10)
 - 4) Create a file in MS-EXCEL showing enrolment of students in four zones in MLIS programme during 2018-2019. Format the borders and add a line chart to present this data. (10)
 - 5) Prepare a database for circulation section of a library in MS Access. (Details will be provided by the Counsellor/Supervisor) (10)

MLI-002: Library Automation

TMA-Theory

Coverage

Course: **Library Automation**

Blocks: **1 to 4**

Units: **1 to 14**

Course Code: **MLI-002**

Assignment Code: **AST- 1/TMA-T/Jan. & July 2019**

Total Marks: **50**

- I) Answer *any two* questions in *not more than 1000 words each*.
- 1) Discuss in detail the functional features of a serial control system of library automation software. (15)
 - 2) Explain the criteria for evaluating a bibliographic database. (15)
 - 3) Define Electronic Document Delivery Service (EDDS). Discuss the steps involved in it. (15)
- II) Answer *any four* of the following in *not more than 500 words each*.
- 1) Explain the concept of a field and content designator in a MARC record (5)
 - 2) Describe the advantages of using an expert system to provide reference service in a library. (5)
 - 3) Discuss in-house retro conversion stating its advantages and disadvantages. (5)
 - 4) Enumerate the components of a SDI system and explain any one (5)
 - 5) Describe the common features of integrated library management software (5)
 - 6) Explain the concept of 'information intermediary' (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. & July 2019**

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. (a) Create a database of six books received to be acquired in a library with (15)
the following fields:
Author, Title, Name of Publisher, Place of Publication, Year of Publication, Pages,
Subject Heading and Accession Number.
Provide meaningful data on your own
 - (b) Select any four titles from these for approval (5)
 - (c) Generate reports for: Books approved, Books rejected and Books requested. (5)
 2. (a) Create a database of five records each for publishers, suppliers and binders with (15)
the following fields of books requested by users for acquisition.
Approve Name, Address email and contact number.
Provide meaningful data on your own
 - (b) Generate the list of publishers, binders and suppliers separately. (10)

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: **Information Systems**

Blocks: **1 to 4**

Units: **1 to 14**

Course Code: **MLI-003**

Assignment Code: **AST/TMA-T/ Jan. & July 2019**

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) Define Expert Systems. Describe in detail their structure and major components. (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) Briefly explain the criteria for evaluation of information retrieval systems. (5)
- 5) Briefly explain the criteria for evaluation of information retrieval systems (5)
- 6) Define SQL. Describe the need of Structured Query Formulation (5)

MLI-003: Information Systems

TMA-Practical

Coverage

Course: **Information Systems**

Blocks: **1 to 4**

Units: **1 to 14**

Course Code: **MLIL-003**

Assignment Code: **AST/TMA-P/ Jan. & July 2019**

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)

Number

(b) JOURNAL_TITLE Te

(i) JOURNALS

(ii) VENDORS

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

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

MLI-004: Networking and Internet Technology

TMA-Theory

Coverage

Course Code: **MLI-004**

Course: **Networking and Internet Technology**

Assignment Code: **AST/TMA-T/ Jan. & Jul. 2019**

Blocks: **1 to 3**

Total Marks: **50**

Units: **1 to 14**

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

- 1) Discuss how three-tier architecture tries to overcome the limitations of two-tier architecture. Describe different types of middle ware products. (15)
- 2) What is SMTP? Describe its functions and limitations. Discuss how POP and IMAP try to solve the problems of SMTP? (15)
- 3) Explain how information can be secured in Internet. (15)

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

- 1) Explain the essential elements necessary to make a Virtual Private Network (VPN) functional. (5)
- 2) What is World Wide Web (WWW)? How does it work? (5)
- 3) Explain the client-server architecture and discuss its limitations. (5)
- 4) Discuss in brief different types of computer viruses and suggest remedies for avoiding them. (5)
- 5) Explain the concept of Extranet. Discuss its advantages (5)
- 6) Discuss the features of Z 39.50. (5)

MLIL-004: Networking and Internet Technology

TMA-Practical

Coverage

Course: **Networking and Internet Technology**

Blocks: **1 to 3**

Units: **1 to 14**

Course Code: **MLIL-004**

Assignment Code: **AST/TMA-P/ Jan. & Jul.2019**

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) Configure your machine to perform the following tasks:
 - (i) FTP through client (5)
 - (ii) TCP/IP using local server and machine IPs. (5)

- 2) Download and install on your system latest version of Flash Media Player and Google Chrome. (10)
 - (i) Create an e-mail account on Yahoo and subscribe to any Yahoo groups. (10)
 - (ii) Send a message with attachment using the newly created e-mail account to your own personal email account. (5)

- 3) Find out:
 - (i) Scholarships offered by MHRD (5)
 - (ii) N-List programme of INFLIBNET (5)
 - (iii) The current projects of NISCAIR (5)

MLI-005: Internet Resources

TMA-Theory

Coverage

Course: **Internet Resources**

Blocks: **1 to 2**

Units: **1 to 7**

Course Code: **MLI-005**

Assignment Code: **AST/TMA-T/Jan. & Jul.2019**

Total Marks: **50**

- I) Answer *any two* of the following in *not more than 1000 words each*.
- 1) Define meta resources. Describe different types of meta resources. (15)
 - 2) Discuss the subscription and access points provided by the publishers to various Internet based electronic resources. (15)
 - 3) Explain how a digital library is different from a traditional library. Describe the steps involved in building a digital library. (15)
- II) Answer *any four* of the following in *not more than 500 words each*.
- 1) Briefly describe the formats and media types used in a digital library. (5)
 - 2) What are the criteria used to judge the suitability of an internet e-resource? (5)
 - 3) Discuss with examples the types of search engines available on the Internet along with their advantages and disadvantages. (5)
 - 4) Describe some of the subject-based gateways and virtual libraries in the area of social sciences. (5)
 - 5) Describe the types of professional societies in humanities available on the Internet. Give your answer with suitable examples. (5)
 - 6) Discuss the ways of keeping up to date with new information resources on the Internet in the area of sciences. (5)

MLIL-005: Internet Resources

TMA-Practical

Coverage

Course: **Internet Resources**

Blocks: **1to2**

Units: **1 to 7**

Course Code: **MLIL-005**

Assignment Code: **AST/TMA-P/Jan.&Jul.2019**

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) Browse the web and find out Digital Library Projects of USA, UK and India. (20)
 - (i) Compile information about on any 6 Projects by taking 2 Projects each from all the three countries.
 - (ii) Save the output in six files. All the file names should contain the Project name.
 - (iii) Save all the files in one Folder titled 'DL Projects'.

- II) Find out 5 journals which are freely available full-text in the area of 'Sociology'. (15)
 - (i) Write down their URL's indicating their components.
 - (ii) Show TOC's of the recent issues of the selected five journals.
 - (iii) Open any five full-text articles by taking one each from the selected five journals.
 - (iv) Save these articles in one folder named 'Sociology'.

- III) List at least five prominent LIS associations in the world. (15)
 - (i) Write their website addresses.
 - (ii) Find out the names of their publications.
 - (iii) Write about the type of membership they offer along with the membership fee.
 - (iv) Mention the name(s) of award(s), fellowship(s) offered by them.

MLI-006: Content Development

TMA-Theory

Coverage

Course: **Content Development**

Blocks: **1 to 2**

Units: **1 to 10**

Course Code: **MLI-006**

Assignment Code: **AST/TMA-T/Jan.&Jul.2019**

Total Marks: **50**

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

- 1) Describe the functions of server page technologies. Discuss the features of ASP and JSP. (15)
- 2) Explain the concept of Information Resource Management (IRM). Describe the key elements of Willard model of IRM. (15)
- 3) What do you understand by Field 856? Discuss the constraints of cataloguing Internet resources. (15)

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

- 1) Discuss 'Internet as an information system model'. (5)
- 2) What is netiquette? Describe some general rules to be followed while communicating through Internet. (5)
- 3) Describe the steps involved in creating a web page. (5)
- 4) Discuss various services offered by Internet. (5)
- 5) Explain different steps for qualitative content analysis. (5)
- 6) Describe the Project Scorpion. (5)

MLIL-006: Content Development

TMA-Practical

Coverage

Course: **Content Development**

Blocks: **1 to 2**

Units: **1 to 10**

Course Code: **MLIL-006**

Assignment Code: **AST/TMA-P/Jan.& Jul.2019**

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) Display the following using HTML tags: (15)

- A few ball games
 - ❖ Football
 - ❖ Hockey
 - ❖ Cricket
- A few international games
 - ❖ Commonwealth games
 - ❖ Olympic games
 - ❖ Asian games
- A few IGNOU programmes
 - ❖ BLIS
 - ❖ MLIS
 - ❖ PGDLAN
 - ❖ PhDLIS

2) Prepare bibliographic data using XML (Select any document of your choice) (10)

3) Develop a website for JRD Tata Memorial Library, IISc, Bangalore with the following features: (20)

1. Main page with banner and menu in frames with the following information:

The Library of the Indian Institute of Science (IISc.) Bangalore, was established in 1911 and it is one of the first three departments started in the Institute. It is regarded as one of the best scientific and technical libraries in India. Apart from the main library it has departmental libraries also. The library moved in to the present premises in January 1965, built out of grants provided by University Grants Commission (UGC), in commemoration of the Golden Jubilee Celebrations of the Institute in

1959. In 1995 the library was renamed as "JRD Tata Memorial Library." The National Board for Higher Mathematics (NBHM) has recognized this library as Regional Center for Mathematics for the south region and continued to award a special grant towards subscription of Journals in Mathematics. It is no exaggeration to state that the IISc library is the largest and finest of its kind in this part of the world.

Library Collection

The collection of the library which includes books, journals, reports, standards and patents is regarded one of the richest collections in the country, in the field of science and technology. This rich and valuable collection built over nine decades has some of the rare reference materials and several important journals. This vast reservoir of knowledge, on a conservative estimate, is worth over Rs. 400 crores. The annual budget of the library is over Rs.12.00 crores of which subscription towards periodicals alone is about 11.00 crores. The library currently receives over 1500 periodical titles of which 1210 are subscribed while the remaining titles are received as gratis and on exchange basis. In addition, over 10,000 Journals are accessible online due to INDEST Subscription. The total holdings of the library exceeds 4,11,676 documents.

Library Services

The library offers services such as Reference Services, Referral Service, User Guidance Service, Circulation Service including Inter Library Loan and Document Delivery Service, Weekly display of recent additions of periodicals and books including E - mail distribution of these lists to users on our mailing list, Bibliographic Service, Photocopy Service etc. Current awareness service is provided comprising regular display of Photocopy copies of articles published by the Institute faculty and students, in various periodicals that are being received in the library. Under the Corporate Membership Facility (CMF), reference alone facility has been extended to Corporate Organizations/Industries involved in R & D activities. Currently about 200 organizations/industries are availing this facility.

2. Menu with the link to E-resources, Contact, FAQs.

(5)

MLI-007: Programming

TMA- Theory

Coverage
Course: **Programming**
Block: **1**
Units: **1 to 3**

Course Code: **MLI-007**
Assignment Code: **AST/TMA-T/ Jan. & Jul. 2019**
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)
 - 3) 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. 2019**
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/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 to calculate the fine to be charged on books returned late in a library. (10)
- 2) Write a program using if- then loop for issuing general books and not reference books in a library. (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. (10)
 - ii) Sort the student objects in ascending order of their total marks. (5)
- 4) Write a program to implement and test a recursive function for a palindrome. (10)
A palindrome is an alphanumeric string such that the string reads the same in the forward and backward direction.
- 5) Write a program that takes an input of three integers from the keyboard and outputs the sum, average, and product of the numbers. (5)

OR

Group B: (Visual Basic)

- 1) Write and implement an event procedure to design a simple calculator, where the user types a number into a text box and the program displays the square of this number in another textbox. (10)
- 2) Write a program to convert temperature in Celsius into Kelvin, where $\text{Kelvin} = 273 + \text{Celsius}$. (10)
- 3) Write a program that prints a table with two columns and four rows. The first column consists of list of countries and the second column consists of list of currencies that are related to countries in first, but not corresponding exactly. When the user clicks on "Submit" button, the program should rearrange the data in two columns such that the country and respective currency is placed in corresponding columns. Use appropriate VB elements. Make suggestions, if any. (10)
- 4) Create a form with a picture box. Find 2 interesting pictures. Use a timer control to cycle the pictures every 2 seconds. (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 program to sort a given array of accession numbers in ascending order (You may select about 15 accession numbers of 5 digits at random). (10)
- 2) Write a small program that accepts to represent the following pattern: (10)
1
1 2
1 2 3
1 2 3 4
- 3) Write a program to find the smallest element in an array. (10)
- 4) Show two ways to concatenate the following two strings together to get the string "Good Morning": (10)
i) String 1= "Good";
ii) String 2= "Morning"
- 5) Write a program to find the area of a circle. (10)