POST GRADUATE DIPLOMA IN COMPUTER APPLICATION (PGDCA)

COURSE OBJECTIVES

Course Duration : 1 Year (TWO SEMESTERS)

Eligibility : Any Graduate

There are three main objectives of this degree course.

- To prepare a person who can work as Assistant Programmer in an organization and to train students to a level where they can readily compete for seats for lateral entry to advanced degree courses like MSc(CS).
- To prepare Computer Operator to operate various office packages effectively with some analytical approach and who can be directly employed by many organization.
- To prepare Computer Assistant to Chartered Accountant The course has been designed keeping in mind the desirable characteristics of a competent computer professional. We have identified these characteristics to be the following.

    1. Strong knowledge and skill base of the followings from the core field :
        - Office Application packages.
        - Programming methodology & techniques
        - LAN and Internet
    2. Ability to work in a team.

THE UNIVERSITY

This is the only University of its kind not only in India but all over the World. This has been established by an Act of the Legislature of the state of Uttar Pradesh in 2001. The Name of the said University has already been included in the list of Universities maintained by the University Grants Commission under section 2(f) and it has been declared eligible to receive central assistance under section 12(b) of the UGC Act 1956.

The objective of the University is to ensure greater participation of disabled in higher & professional education by providing disabled friendly campus, class rooms and courses in order to prepare students of strong character enriched with traditional and modern knowledge.

RPOGRAMME STRUCTURE

Duration of the Program: The minimum duration for PGDIT students in one years (Two Semester) and the maximum duration is Three years.

Note: There is no limit for the number of attempts for writing the examination to clear the back papers provided it falls within the maximum duration permitted for completion of the course.

Academic Calendar: The academic calendar starts from 15th July and ends on 15th May of subsequent year. Admissions are done once in a year during June and July.

Criteria for Passing the Examination: In each paper, a student at least 40% marks in theoretical and 40% in practical examination. A student who fails in any one will be required to reappear in that component only.

Pattern of Question Paper (External)-

Time : 2.30 hrs, Max Marks : 80

1. There will be two sections.
2. The first section carrying 10 marks, will be objective type and compulsory, that covers all units of that component.
3. The second section contains eight questions carrying 14 marks each and five questions out of these are to be attempted.

Pattern of Internal Evaluation- Max. Marks: 20

1. There will be 20 marks for Internal Evaluation.
2. In which 10 marks are allotted for Assignment related to that particular component.
3. And 10 marks will be reserved for Internal Test. There will be two paper for Internal Test, the highest attained marks in separate papers will be taken in account in the result of concern examinee.

THE SYLLABUS

The Semester wise Syllabus for Post Graduate Diploma in Computer Application (PGDCA) Program:

PGDCA – Ist Semester

Paper Code	Subject Title	Credits
PGD-101	**Computer fundamentals and programming concepts.**	4
PGD-102	**PC Packages**	4
PGD-103	**Operating System**	4
PGD-104	**Internet and E-Commerce**	4
PGD-105	**Practical Software lab based on PGD-101, 102, 103, and 104**	2+2
Qualifying Paper		
ES-006	**Environmental Studies**	4

PGDCA– IInd Semester

Paper Code	Subject Title	Credits
PGD-201	**Programming in Visual basic .Net**	4
PGD-202	**Computer Network**	4
PGD-203	**System Analysis And Design**	4
PGD-204	**Project Work**	6
PGD-205	**Viva Voce based on 201 and 204**	2

DETAILED SYLLABUS OF EACH SEMESTER

FIRST SEMESTER

PGD-101

Computer fundamentals and programming concepts.

Computer fundamentals: Number system: Decimal, octal, binary and Hexadecimal Representation of integers, fixed and floating points, character Representation: ASCII, EBSDIC

Functional units of computer, I/O devices, primary and secondary memories.

Programming fundamentals: Algorithm development techniques of problem Solving, flowcharting, stepwise refinement, Algorithms for searching, sorting (exchange and insertion), merging of ordered lists.

Programming in C: Representation of integers, characters, real. Data types: Constants and variables; Arithmetic expression, Assignment statements, Logical expression, sequencing, alteration and iteration; arrays. String Processing, sub programs, recursion files and pointers structured programming concepts; top down design, development of efficient programs, program correctness, debugging and testing of programs.

***PGD-102* PC Packages**

UNIT – I

MS Windows: Introduction to M.S. Windows; Features of Windows; Various versions of Windows & its use; Working with Windows; My Computer & Recycle bin ; Desktop, Icons and Windows Explorer; Screen description & working styles of Windows; Dialog Boxes & Toolbars; Working with Files & Folders; simple operations like copy, delete, moveing of files and folders from one drive to another, Shortcuts & Autostarts; Accessories and Windows Settings using Control Panel- setting common devices using control panel, modem, printers, audio, network, fonts, creating users, internet settings, Start button & Program lists; Installing and Uninstalling new Hardware & Software program on your computer.

UNIT – II

MS Word : Introduction to MS Office; Introduction to MS-Word; Features & area of use. Working with MS Word.; Menus & Commands; Toolbars & Buttons; Shortcut Menus, Wizards & Templates; Creating a New Document; Different Page Views and layouts; Applying various Text Enhancements; Working with – Styles, Text Attributes; Paragraph and Page Formatting; Text Editing using various features ; Bullets, Numbering, Auto formatting, Printing & various print options. Spell Check, Thesaurus, Find & Replace; Headers & Footers ; Inserting – Page Numbers, Pictures, Files, Autotexts, Symbols etc.; Working with Columns, Tabs & Indents; Creation & Working with Tables including conversion to and from text; Margins & Space management in Document; Adding References and Graphics; Mail Merge, Envelops & Mailing Labels. Importing and exporting to and from various formats.

UNIT – III

MS Excel: Introduction and area of use; Working with MS Excel.; concepts of Workbook & Worksheets; Using Wizards; Various Data Types; Using different features with Data, Cell and

Texts; Inserting, Removing & Resizing of Columns & Rows; Working with Data & Ranges; Different Views of Worksheets; Column Freezing, Labels, Hiding, Splitting etc.; Using different features with Data and Text; Use of Formulas, Calculations & Functions; Cell Formatting including Borders & Shading; Working with Different Chart Types; Printing of Workbook & Worksheets with various options.

UNIT – IV

MS PowerPoint: Introduction & area of use; Working with MS PowerPoint; Creating a New Presentation; Working with Presentation; Using Wizards; Slides & its different views; Inserting, Deleting and Copying of Slides; Working with Notes, Handouts, Columns & Lists; Adding Graphics, Sounds and Movies to a Slide; Working with PowerPoint Objects; Designing & Presentation of a Slide Show; Printing Presentations, Notes, Handouts with print options.

PGD-103 Operating Systems

UNIT-I

Operating System as Resource Manager: Operating system classifications, Simple monitor. Multiprogramming, time sharing, real time systems, Multiprocessor systems. Operating system services.

UNIT-II

File Systems: File supports. Access methods, allocation methods-contiguous linked and index allocation, Directory systems-single level tree- structures. A cyclic graph and general graph directory, file protection

UNIT-III

CPU Scheduling: Basic scheduling concepts, process overviews. Process states, multiprogramming, schedulers and scheduling algorithms. Multiple-processor scheduling

UNIT-IV

Memory Management: Bare machine approach, Resident monitor, partition, paging and segmentation, virtual memory. Demand paging.

UNIT-V

Deadlocks: Deadlock characterization, Deadlock prevention, avoidance, detection and recovery.

UNIT-VI

Resource protection: Mechanisms, Policies and domain of protection, Access matrix and its implementation, dynamics protection structures.

UNIT-VII

Case study of the windows- NT: Design principle, system components, Environment subsystem, File system; programmer interface.

PGD– 104 Internet & E– Commerce

UNIT–I

Internet: Evolution, Concepts, Internet Vs Intranet, Growth of Internet, ISP, ISP in India, Types of connectivity - Dial-up, Leased line, DSL, Broadband, RF, VSAT etc., Methods of sharing of Internet connection, Use of Proxy server, Internet Services – USENET, GOPHER, WAIS, ARCHIE and VERONICA, IRC, WORLD WIDE WEB (WWW) - History, Working, Web Browsers, Its functions, URLs, web sites, Domain names, Portals. Concept of Search Engines, Search engines types, searching the Web, Web Servers, TCP/IP and others main protocols used on the Web. E-Mail: Concepts, POP and WEB Based E-mail, merits, address, Basics of Sending & Receiving, E-mail Protocols, Mailing List, Free E-mail services, e-mail servers and e-mail clients programs.

UNIT–II

HTML introduction, features, uses & versions Using various HTML tags, Elements of HTML syntax, Head & Body Sections, , Inserting texts, Text alignment, Using images in pages, Hyperlinks – text and images, bookmarks, Backgrounds and Color controls, creating and using Tables in HTML, and presentation, Use of font size & Attributes, List types and its tags. Cascading Style sheets – defining and using simple CSS, Use of Frames and Forms in web pages, Issues in Web site creations & Maintenance, Web Hosting and publishing Concepts, Hosting considerations, Choosing Web servers

UNIT–III

Javascript Overview, Javascript and the WWW, Javascript vs. VBScript, Javascript vs. Java, Javascript versions, Script element. Functions: Functions introduction, Calling functions, Javascript Comments, Variables: Variables overview, declaring variables, Types of variables, Casting variables, Alert box , Prompt & confirm. Expressions: Arithmetic operators, Assignment operators, Logical operators, Expressions and precedence, Statements: If statement, For statement, While statement, Break/Continue Creating arrays/event handlers, JavaScript Object model, Object and Events in JavaScript – OnClick, On MouseOver, On Focus, OnChange, OnLoad etc.

UNIT–IV

E - Commerce An introductions, Concepts, Advantages and disadvantages, Technology in E-Commerce, Internet & E-business, Applications, Feasibility & various constraints. E-transition challenges for Indian corporate, the Information Technology Act 2000 and its highlights related to e-commerce. Electronic Payment Systems: Introduction, Types of Electronic Payment Systems, Digital Token-Based Electronic Payment Systems, Smart Cards and Electronic Payment Systems, Credit Card-Based Electronic Payment Systems, Risk and Electronic Payment Systems. E-security – Security on the internet, network and web site risks for e-business, use of firewalls, secure physical infrastructure.

PGD-105 Practical Software lab based on PGD-101, 102, 103, and 104

ES-006 Environmental Studies

UNIT-1:

THE MULTIDISCIPLINARY NATURE OF ENVIRONMENTAL STUDIES

Definition, Scope and Importance, Need for Public Awareness.

UNIT-2: NATURAL RESOURCES

Renewable and Non-renewable Resources:

NATURAL RESOURCES AND ASSOCIATED PROBLEMS: -

a) ***FOREST RESOURCES:*** use and over-exploitation, deforestation, case studies. Timber extraction, mining, dams and their effects on forests and tribal people.
b) ***WATER RESOURCES:*** use and over-utilization of surface and ground water, floods, drought, conflicts over water, dams-benefits and problems.
c) ***MINERAL RESOURCES:*** use and exploitation, environmental effects of extracting and using mineral resources, case studies.
d) ***FOOD RESOURCES:*** World food problems, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity, case studies.
e) ***ENERGY RESOURCES:*** Growing energy needs, renewable and nonrenewable energy sources, use of alternate energy sources, case studies
f) ***LAND RESOURCES:*** Land as a resource, land degradation, man induced landslides, soil erosion and desertification.

- Role of an individual in conservation of natural resources.
- Equitable use of resources for sustainable lifestyles

UNIT-3: ECOSYSTEMS

- Concept of an ecosystem
- Structure and function of an ecosystem
- Producers, consumers and decomposers
- Energy flow in the ecosystem Ecological succession
- Food chains, food webs and ecological pyramids
- Ntroduction, types, characteristic features, structure and function of the following ecosystems **: -**

  A) Forest ecosystem b) Grassland ecosystem
  c) Desert ecosystem d) Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries)

UNIT-4: BIODIVERSITY AND ITS CONSERVATION

- Introduction – Definition: genetic, species and ecosystem diversity.
- Biogeographical classification of India
- Value of biodiversity: Consumptive use, productive use, social, ethical, and aesthetic and option values.

- Biodiversity at global, National and local levels.
- India as a mega-diversity nation
- Hot-sports of biodiversity.
- Threats to biodiversity: Habitat loss, poaching of wildlife, man-wildlife conflicts.
- Endangered and endemic species of India
- Conservation of biodiversity: In-situ and Ex-situ conservation of biodiversity.

UNIT-5: ENVIRONMENTAL POLLUTION

DEFINITION:

- Causes, effects and control measures of: -
  a) Air pollution b) Water pollution
  c) Soil pollution d) Marine pollution
  e) Noise pollution f) Thermal pollution
  g) Nuclear pollution
- Solid waste Management: Causes, effects and control measures of urban and industrial wastes.
- Role of an individual in prevention of pollution
- Pollution case studies
- Disaster Management: Floods, earthquake, cyclone and landslides.

UNIT-6: SOCIAL ISSUES AND THE ENVIRONMENT

- From Unsustainable to Sustainable development
- Urban problems related to energy.
- Water conservation, rain water harvesting, watershed management
- Resettlement and rehabilitation of people; its problems and concerns. Case Studies
- Environmental Ethics: Issues and possible solutions.
- Climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust. Case Studies.
- Wasteland reclamation.
- Consumerism and waste products
- Environment Protection Act.
- Air (Prevention and Control of Pollution) Act
- Water (Prevention and Control of Pollution) Act
- Wildlife Protection Act
- Forest Conservation Act
- Ssues involved in enforcement of environmental legislation
- Public awareness

UNIT-7: HUMAN POPULATION AND THE ENVIRONMENT

Population growth, variation among nations, Population explosion: Family Welfare Programme, Environment and human health, Human Rights, Value Education, Women and Child Welfare, Role of Information Technology in Environment and human health,

Case Studies

UNIT-8: FIELD WORK

- Visit to a local area to document environmental assets-river / forest / grassland / hill /mountain.
- Visit to a local polluted site – Urban / Rural / Industrial / Agricultural
- Study of common plants, insects, birds.
- Study of simple ecosystems-pond, river, hill slopes, etc. (Field work Equal to 5 lecture hours).

SECOND SEMESTER

PGD 201- PROGRAMMING WITH VISUAL BASIC.NET
(THE SYLLABUS IS BASED ON THE VISUAL STUDIO 2003)

UNIT–I

Introduction to .NET, NET Framework features & architecture, CLR, Common Type System, MSIL, Assemblies and class libraries. Introduction to visual studio, Project basics, types of project in .Net, IDE of VB.NET- Menu bar, Toolbar, Solution Explorer, Toolbox, Properties Window, Form Designer, Output Window, Object Browser. The environment: Editor tab, format tab, general tab, docking tab. visual development & event drive Programming, Methods and events.

UNIT–II

The VB.NET Language- Variables -Declaring variables, Data Type of variables, Forcing variables declarations, Scope & lifetime of a variable, Constants, Arrays, types of array, control array, Collections, Subroutines, Functions, Passing variable, Number of Argument Optional Argument, Returning value from function. Control flow statements: conditional statement, loop statement. Msgbox & Inputbox.

UNIT – III

Working with Forms : Loading, showing and hiding forms, controlling One form within another. GUI Programming with Windows Form: Textbox, Label, Button, Listbox, Combobox, Checkbox, PictureBox, RadioButton, Panel, scroll bar, Timer, ListView, TreeView, toolbar, StatusBar.There Properties, Methods and events. OpenFileDilog, SaveFileDialog, FontDialog, ColorDialog, PrintDialog. Link Label. Designing menues : ContextMenu, access & shorcut keys.

UNIT–IV

Object oriented Programming: Classes & objects, fields Properties, Methods & Events, constructor, inheritance. Access Specifiers: Public Private, Protected. Overloading, My Base & My class keywords.

Overview of OLE, Accessing the WIN32 API from VB.NET & Interfacing with office97, COM technology, advantages of COM+, COM & .NET, Create User control, register User Control, access com components in .net application.

UNIT–V

Database programming with ADO.NET – Overview of ADO, from ADO to ADO.NET, Accessing Data using Server Explorer. Creating Connection, Command, Data Adapter and Data Set with OLEDB and SQLDB. Display Data on data bound controls, display data on data grid. Generate Reports Using CrystalReportViwer.

PGD – 202 Computer Networks

UNIT-I

Networking - Needs and Advantages, Network, Types- Client, Server and Peers, introduction to various types of servers. Transmission technology - Signal Transmission-Digital signaling, Analog Signaling, Asynchronous & synchronous Transmission, Wired & Wireless transmission, Base band and Broadband transmission, Transmission Media types- properties & specialty of various media – types, comparative study. Network Topology-Bus, Star, Ring, Star bus, Starring, Mesh – Features, Advantages and disadvantages of each type.

UNIT–II

Network adapters – working principals, configuration and selection, Network Protocols-Hardware Protocols, software Protocols. The theoretical Network Model - OSI, IEEE 802 standards, 802.3, 802.4, 802.5, Real World Networks – Ethernet, Fast Ethernet, Token Rings, FDDI, ATM, ARCnet and AppleTalk.

UNIT–III

Network Scaling-No. of nodes, distance, software, speed, special requirements, Connectivity Devices: Modem, Repeater, Hub – Active, Passive and Intelligent, Bridge-Local, Remote, Wireless, Routers-Static and Dynamic, Switches and its types . Brouters and Gateways. Overview of TCP/IP reference model, TCP/IP Protocol suites – Comparision between OSI and TCP/IP Models, Classification of TCP/IP protocols- IP, TCP, UDP, ARP, ICMP, TCP/IP Services Protocols- DHCP, DNS, WINS, FTP, SMTP, TELNET, NFS. IP Addressing and Subnet- IP Address – Class A, B & C. Domain Name Addressing, URL, e-mail address, Subnet & subnet mask.

UNIT–IV

Network building blocks requires for setting up a small LAN using Windows in a office, Hardware & software required, Simple Installation and configuration of Networking under Windows. Using HyperTerminal in Windows, overview and using Network Setup Wizard in Windows, Some basic networking configuration using Windows 95/98/XP/2000/2003 Server and clients, Simple network administration. Setting up Internet Connection Sharing in Windows

PGD– 203 System Analysis & Design

UNIT-I

Overview of System Analysis and Design:

System Development life cycle, concept and Models: requirements determination, logical design, physical design, test planning, implementation, planning and performance evaluation, communication, interviewing, presentation skills: group dynamics: risk and feasibility analysis, group based approaches, JAD, structures walkthroughs, and design and code review: prototyping: database design software quality metrics: application categories software package evaluation acquisition.

UNIT-II

Information Requirement Analysis: Process modeling with physical logical data flow diagrams, data modeling with logical entity relationship diagrams.

Developing a Proposal: Feasibility study and cost estimation.

UNIT-III

System Design: Design of input and control, design of output and control, file design/database design, Process design, user interface design, prototyping, software constructor, documentation.

Application development methodology and CASE tools:

Information engineering, structured system analysis and design, and object oriented methodologies for application development data modeling, process modeling, user interface design, and prototyping, use of computer aided engineering (CASE) tools in the analysis, design and implementation of information systems.

UNIT-IV

Design and Implementation on OO Platform: Object oriented analysis and design through object modeling technique, object modeling, dynamic modeling and functional object oriented design and object oriented programming systems for implementation, object oriented databases.

UNIT-V

Managerial issues in Software Project: Introduction to software markets; Planning of software projects, size and cost estimates, project scheduling, measurement of software quality and productivity, ISO and Capability Maturity Models for organization growth.

PGD 204– Project work

PGD– 205- Viva Voce based on 201 and 204.

Notes

Pattern of Question Paper (External)- Time : 3 hrs, Max Marks : 70

1. There will be eight questions.

2. The first question carrying 30 marks, will be objective type and compulsory, that covers all units of that component.

3. Other seven questions carrying equal marks and four are to be attempted out of them.

Pattern of Internal Evaluation- Max. Marks: 30

1. There will be 30 marks for Internal Evaluation.

2. In which 10 marks are allotted for Assignment related to that particular component.

3. And 20 marks will be reserved for Internal Test. There will be two paper for Internal Test, the highest attained marks in separate papers will be taken in account in the result of concern examinee.

Practical & Viva Voce– Max. Marks : 100

70 marks for External and 30 marks for Internal evaluation.

GUIDELINES FOR SUBMISSION OF BCA PROJECT
(Max. Marks: 300)

All the candidates of BCA are required to submit a project-report based on the work done by him/her during the assignment period.

THE GUIDE

The Guide for BCA would be a person having at least MCA/B. Tech/M.Sc(CS)/M.Sc(IT) or equivalent.

A guide cannot guide more than six projects of JRHU at a given time.

Note: If the company/organization in which the student has done his project is not allowing the student to submit the code to the University then the company/oraganisation has to send a confidential report, clearly indicating the percentage of marks obtained by the student for his software project. In the absence of such a certificate, the student will not be entitled for any marks for their project.

If on the basis of viva if the examiner feels that the project work has not actually being done by the student then he/she can allot zero marks for software coding.

SUMMARY/ABSTRACT

All students must submit a summary/abstract separately with the project report. Summary, preferably, should be of about 3-4 pages. The content should be as brief as is sufficient enough to explain the objective and implementation of the project that the candidate is going

to take up. The write up must adhere to the guidelines and should include the following:

- Name / Title of the Project
- Statement about the Problem
- Why is the particular topic chosen?
- Objective and scope of the Project
- Methodology (including a summary of the project)
- Hardware & Software to be used
- Testing Technologies used
- What contribution would the project make?

TOPIC OF THE PROJECT- This should be explicitly mentioned at the beginning of the Synopsis. Since the topic itself gives a peep into the project to be taken up, candidate is advised to be prudent on naming the project. This being the overall impression on the future work, the topic should corroborate the work.

OBJECTIVE AND SCOPE: This should give a clear picture of the project. Objective should be clearly specified. What the project ends up to and in what way this is going to help the end user has to be mentioned.

PROCESS DISCRIPTION: The process of the whole software system proposed, to be developed, should be mentioned in brief. This may be supported by DFDs / Flowcharts to explain the flow of the information.

RESOURCES AND LIMITATIONS: The requirement of the resources for designing and developing the proposed system must be given. The resources might be in form of the hardware/software or the data from the industry. The limitation of the proposed system in respect of a larger and comprehensive system must be given.

CONCLUSION: The write-up must end with the concluding remarks-briefly describing innovation in the approach for implementing the Project, main achievements and also any other important feature that makes the system stand out from the rest.

The following suggested guidelines must be followed in preparing the Final project Report:

Good quality white executive bond paper A4 size should be used for typing and duplication. Care should be taken to avoid smudging while duplicating the copies.

Page Specification :(Written paper and source code)

- Left margin - 3.0 cms
- Right margin- 2.0 cms
- Top margin 2.54 cms
- Bottom margin 2.54 cms
- Page numbers - All text pages as well as Program source code listing should be numbered at the bottom center of the pages.

Normal Body Text: Font Size: 12, Times New Roman, Double Spacing, Justified. 6 point

above and below para spacing

Paragraph Heading Font Size: 14, Times New Roman, Underlined, Left Aligned. 12 point above & below spacing.

Chapter Heading Font Size: 20, Times New Roman, Centre Aligned, 30 point above and below spacing.

Coding Font size : 10, Courier New, Normal pasted inside of the back cover of the project report.

Submission of Project Report to the University : The student will submit his/her project report in the prescribed format. The Project Report should include:

1. One copy of the summary/abstract.
2. One hard Copy of the Project Report.
3. Soft copy of project on Floppy/CD in a thick envelope
4. The Project Report may be about 75 pages (excluding coding).

FORMAT OF THE STUDENT PROJECT REPORT ON COMPLETION OF THE PROJECT

- Cover Page as per format
- Acknowledgement
- Certificate of the project guide/Centre Manager as at Annexure III
- Certificate of the Company/Organisation (for direct candidates)
- Synopsis of the Project
- Main Report
    - Objective & Scope of the Project
    - Theoretical Background Definition of Problem
    - System Analysis & Design vis-a-vis User Requirements.
    - System Planning (PERT Chart)
    - Methodology adopted, System implementation & details of Hardware & Software used System used.
    - Cost and benefit Analysis
    - Detailed Life Cycle of the Project
        - ERD, DFD
        - Input and output screen design
        - Process involved
        - Methodology used for testing
        - Test Report, Printout of the Report print out of the Code Sheet
- User/Operational Manual - including security aspects, access rights, back up, controls, etc.

Annexure:

1. Brief background of the organisation where the student has developed the project.
2. Data Dictionary (This should give a catalogue of the data elements used in the system / sub system developed. The following are the details required. Write NA if NOT applicable :
3. Data Name , Aliases (if any), Length (Size), Type, Numeric, Alpha, Binary etc.
4. List of abbreviations, Figures, Tables
5. References
   Bibliography
   Website
6. Soft copy of the project on CD/Floppy

Formats of various certificates and formatting styles are as:

1) Certificate from the Guide

Guide Name & Designation Full Address

CERTIFICATE

This is to certify that this project entitled " xxxxxx xxxxx xxxxx xxxx xxxx xxx" submitted in partial fulfillment of the degree of Post Graduate Diploma in Computer Application to the J. R. Handicapped University, Chitrakoot), done by Mr./Ms._____, Roll No. _____ is an is an authentic work carried out by him/her at _____ under my guidance. The matter embodied in this project work has not been submitted earlier for award of any degree or diploma to the best of my knowledge and belief.

Signature of the Student **Signature of the Guide**

2) Self certificate by the students

SELF CERTIFICATE

This is to certify that the dissertation/project report entitled "_____ _____" is done by me is an authentic work carried out for the partial fulfilment of the requirements for the award of the diploma in Computer Applications under the guidance of _____. The matter embodied in this project work has not been submitted earlier for award of any degree or diploma to the best of my knowledge and belief.

Signature of the student **Name of the Student**

ACKNOWLEDGEMENTS

In the "Acknowledgements" page, the writer recognises his indebtedness for guidance and assistance of the thesis adviser and other members of the faculty. Courtesy demands that he also recognise specific contributions by other persons or institutions such as libraries and research foundations. Acknowledgements should be expressed simply, tastefully, and tactfully