Annexure - A

UNIVERSITY COMPUTER CENTRE

DR. BHIMRAO AMBEDKAR UNIVERSITY, AGRA
UNIVERSITY COMPUTER CENTRE
KHANDARI, AGRA-282002

ORDINANCES

For

Post Graduate Diploma in Information Technology
(PGDIT)

1. **ELIGIBILTY:**
   A graduate from of any stream or equivalent from a recognized university.

2. **ADMISSION PROCEDURE:**
   Admission to the programme shall be made on the basis of Entrance Test/Merit as decided by the University.

3. **DURATION OF COURSE:**
   The duration of course will be of one year spreading over two semesters. The maximum period allowed to a candidate for successful completion of course will be two years from the date of admission.

4. **EXAMINATION:**
   Generally 50% paper setters/examiners shall be internal and 50% external each paper will be of three hour duration in the term/end semester examination the marks allotted for each paper shall be as follows:

I.	Term end examination	50 Marks
II.	Internal Assessment	50 Marks

   The minimum pass marks in the term end examination in each paper (including practical and project viva-voce) will be 40%. The answer books of periodic test shall be shown to the examinees by the teacher concerned. The answer books of term/end examination will be deposited to the University for Evaluation as per norms. The answer book of periodic test will be kept only for one year.

5. The candidate will be promoted in the next semester even if he/she fails in the semester concerned. The candidate can reappear in the back paper (s) of the concerned semester with odd/ even semester respectively.

5.1 A Candidate can re-appear in back paper (s) examination subject to a maximum of two attempts.

Signature Not Verified
RAJEEV KUMAR
Digitally Signed By Registrar

5.2 If a candidate fails to obtain 40% marks in term exam of each individual paper (s) then the candidate shall have to appear again of the corresponding semester.

5.3 However, the University has the right to conduct a special examination for back paper (s) at suitable time in the interest of students if it deems fit.

6. There shall be an internal Assessment for the Candidates in each semester. It shall be based on class Attendance/seminar(s) presentation/general performance / Periodic test/assignment (s). All the assignment (s) will be submitted by the candidates in his/her own handwriting/typed. The distribution of marks for internal assessment will be as follows.

First Periodic Test	10 marks
Second Periodic Test	10 marks
Assignment (s)	10 Marks
Seminar/presentation (s)	10 Marks
Attendance	10 Marks

In case a candidate fails to clear internal assessment, default test may be conducted by the concerned teacher/faculty.

7.First semester consist of five theory papers and one practical exam in the syllabus. Each theory paper will carry term exam end semester exam of 50 marks and internal assessment of 50 marks for each subject in the first semester and second semester consist of four theory papers in the syllabi and one major project Viva- voce exam of 200 marks. First semester practical exam and second semester project Viva-Voce will be conducted by the external examiner in collaboration with internal teacher.

8. A candidate will not be allowed to appear in the term/end semester exam if he/she fails to fulfill the require attendance as prescribed by the University.

9. The candidate will be awarded, Division on the basis of aggregate marks obtained in First & Second Semester. Otherwise a candidate will be declared Pass or Fail or RE in the concerned papers in the semester concerned.

9.1 If the candidate fails to clear semester paper in the second semester. A special exam of for such candidate may be conducted as per requirement the with the prior approval of the Vice Chancellor in interest of students. The additional special examination fees will be lived for the same as per the university norms.

Marks shall be assigned as under

			Marks	No. of Courses	Total
I Sem.	(i)	Internal Assessment	50	05	250
	(ii)	Term Exam	50	05	250
	(iii)	Practical		01	100
II Sem.	(i)	Internal Assessment	50	04	200
	(ii)	Term Exam	50	04	200
	(iii)	Practical		01	200
			Grand Total		**1200**

10. Student who absents himself for a period of more than two weeks without prior permission, his/her name will be struck off from the rolls.

The following methods will be adopted to develop candidate's interpersonal skills.

a. Class lectures for theoretical knowledge.
b. Individual presentations.
c. Personality development sessions.
d. Case studies.
e. Providing assignments.
f. Guest lectures by the experts.
g. Surprise test to keep the students updated.

11. To pass a paper in each semester, the student shall be required to secure at least 40% marks in the external examination and internal assessment of each paper, practical examinations and 40% aggregate marks in the semester concerned.

Annexure-B

POST GRADUATE DIPLOMA IN INFORMATION TECHNOLOGY

COURSES OF STUDY AS MODIFIED FROM SESSION 2024-23 ONWARDS

SEMESTER-I

C-1.1	Fundamentals of IT
C-1.2	Problem solving Using 'C'
C-1.3	Operating System
C-1.4	Data Structure
C-1.5	Web Technology
C-1.6	Practical Based on above Papers

SEMESTER-II

C-2.1	Data Base Management System
C-2.2	Computer Networks
C-2.3	Basics of AI
C-2.4	Python Programming
C-2.5	Major Project

(Sandeep Paul)
External Expert

(Reena Dadich)
External Expert

(V. K. Saraswat)
Member

(S. K. Jain) 6/11/23.
Member

(Anil Kumar Gupta) 06/11/23
Convener

DR. BHIMRAO AMBEDKAR UNIVERSITY, AGRA

POST GRADUATE DIPLOMA IN INFORMATION TECHNOLOGY (PGDIT)

ONE YEAR DIPLOMA COURSE

UNIVERSITY COMPUTER CENTRE

SYLLABUS FOR

POST GRADUATE DIPLOMA IN INFORMATION TECHNOLOGY (PGDIT)

First Semester

Paper- 1.1 : Fundamentals of Computer & Information Technology

Paper- 1.2 : PC Packages

Paper -1.3 : Programming Concepts using C

Practical based on one of the above subjects

Second Semester

Paper 2.1 : Database Management System

Paper 2.2 : Basic of Computer Network

Paper 2.3 : Web Designing using HTML and CSS

Practical based on one of the above subjects

Project Work

POST GRADUATE DIPLOMA IN INFORMATION TECHNOLOGY (P.G.D.I.T.)

I SEMESTER

Paper Code	Paper Name	Term Exam Max./Min. Marks	Internal Assessment Max./Min. Marks	Total Max./Min. Marks
Paper-1.1	Fundamentals of Computer & Information Technology	50/20	50/20	100/40
Paper-1.2	PC Packages	50/20	50/20	100/40
Paper-1.3	Programming Concepts using C	50/20	50/20	100/40
Paper-1.4	Practical based on above Papers			100/40
Total marks of I Semester				400/200

POST GRADUATE DIPLOMA IN INFORMATION TECHNOLOGY (P.G.D.I.T.)

II SEMESTER

Paper Code	Paper Name	Term Exam Max./Min. Marks	Internal Assessment Max./Min. Marks	Total Max./Min. Marks
Paper-2.1	Database Management System	50/20	50/20	100/40
Paper-2.2	Basic of Computer Network	50/20	50/20	100/40
Paper-2.3	Web Designing using HTML and CSS	50/20	50/20	100/40
Paper-2.4	Practical based on above Papers			100/40
Paper-2.5	Project Work			200/80
Total marks of II Semester				600/300

UNIVERSITY COMPUTER CENTRE

SYLLABUS FOR
POST GRADUATE DIPLOMA IN INFORMATION TECHNOLOGY
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FIRST SEMESTER

Paper-1.1 : Fundamentals Of Computer & Information Technology

Unit –I Brief history of development of computers, Computer system concepts, Computer system characteristics, Capabilities and limitations, Types of computers-Analog, Digital, Hybrid, General. Special Purpose, Micro, Mini, Mainframe, Super, Generations of computers, Personal Computer (PCs) – IBM PCs, Characteristics, of PC/PCXT/PCAT – configurations, Pentium and Newer PCs specifications and main characteristics .

Unit-II Keyboard, Mouse, Trackball, Joystick, Digitizing tablet, Scanners, Digital Camera, MICR, OCR, OMR, Bar-code Reader, Voice Recognition, Light pen, Touch Screen, Monitors – Characteristics and types of monitors – Digital, Analog, Size, Resolution, Refresh Rate, Video Standard – VGA, SVGA, XGA etc. Printers, Various Storage Devices, Floppy Disks (Winchester Disk), Optical Disks, CD, VCD, CD-R, CD-RW, Zip drive.

Unit-III Need, Types of Software – System software, Application software, System Software Operating System, Utility Program, Programming languages, Assemblers, Compilers and Interpreter, Programming languages-Machine, Assembly,, High Level, 4GL, their merits and demerits, Virus working principles, Types of viruses, virus detection and prevention, viruses on network.

Unit-IV Operating System and its Concepts, functions, Batch processing, Multi programming, multitasking, Time sharing, Real Time Systems, multiprocessing, Spooling, Process; process concepts, process scheduling and concepts of towards concepts of BIOS. Introduction, History & versions of DOS.DOS basics – Physical structure of disk drive name, FAT, file & directory structure and naming rules, booting process, DOS system files,

Unit –V Features of windows OS., starting, Windows, controlling programs and documents, starting Windows after technical problems occurs, shutting down windows, Basic elements of windows 7 Interface. Using the mouse, keyboards, Menus, dialog box, task bar, changing and setting properties, working with application.

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FIRST SEMESTER

Paper-1.2 : PC Packages

Unit-I Operating System basics, Booting Process, Multitasking and Multiprocessing, File System, Direct memory Access, Security, Network management, Program management, Devices management, Basic Elements of Operating Systems, Virtual Memory, Command Line and GUI Based OS, Introduction to Microsoft Windows, Directory Structure, Sharing and Security.

Unit-II Microsoft Word Basics, Area of Uses, Toolbars, Navigation, Settings, Working with Texts, Text Formatting, Layouts, Headers and Footers, Mail Merge, Tables, ClipArt, Borders, Objects, Print and Print Preview, Styling, Insert Menu, Symbols, References, Review, Spell Check, Thesaurus, Find and Replace, Graphics.

Unit-III Microsoft Excel basics, Area of Uses, Toolbars, Navigation, Settings, Sheets, Cells and Address, Working with Rows and Columns, Auto-Text, Range, Formulas, Sort and Filters, Views of Worksheets, Auto-Calculations, Printing Options in Microsoft Excel, Charts and Graphics, Import and Export Data, Data Analytics, Lookup and References, Pivot tables, Page and Print Setup.

Unit-IV Microsoft PowerPoint Basics, Area of Uses, Toolbars, Slides, Presentations, Working with Slides, Using Wizards, Slides and its Views, Handouts, Columns and Lists, PowerPoint Objects, Themes and Animation, Timed Animation, Import and Export.

Unit-V Microsoft Access basics, Area of Uses, Toolbars, Table Design, Datatypes, Primary Keys, Queries, Tables, Merging, Using Criteria, Operators, and Wildcards, Introduction to Controls and Formatting Forms, Parameter Queries, Relationships and Joins, Creating Calculated Expressions.

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FIRST SEMESTER

Paper-1.3: Programming Concepts using C.

Unit-I History of C, Concept of variables and constants, structure of a C program. Operators & Expressions: Arithmetic, Unary, Logical, Bit-wise, Assignment & Conditional Operators, Library Functions, Hierarchy of operaters, control instructions, input output statements.

Unit-II Control Statements: while, do..while, for statements, Nested loops, if..else, switch, break, continue and goto statements.

Unit-III Functions: Defining & Accessing : Passing arguments, Function Prototype, Recursion, Use of Library, Functions, Storage Classes: Automatic, External and Static Variables (Register), Arrays: Defining & Processing, Passing to a function, Multidimensional Arrays. String: Operations of Strings (String handling through built-in & UDF: Length, Compare Concatenate, Reverse, Copy, Character Search using array)

Unit-IV Pointers: Declarations, Passing to a function, Operations on Pointers, Pointers & Arrays, Array of Pointer and functions – call by value and call by function, Pointer to structure, Pointer to functions, Function returning pointers, Dynamic Memory Allocations.

Unit-V Structures: Defining & Processing, Passing to a function, Unions (Array within structure, structure, Nesting of structure, Passing structure and its pointer to UDF, Introduction to Unions and its Utilities) Data Files: Open, Close, Create, Process Unformatted Data Files. (Formatted Console I/O functions, Unformatted Console I/O functions, Modes Of Files, Use Of fopen(), fclose(), fgetc(), fputc(), fgets(), fprintf(), fscanf(), fread(), fwrite(), Command Line Arguments).

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SECOND SEMESTER

Paper 2.1 : Database Management System

Unit-I Operational data, Purpose of database system, Views of data, Data models: Relational, Network, Hierarchical, Schemas, Data Dictionary, Types of Database language : DDL, DML, Structures of a DBMS, Advantages & Disadvantages of a DBMS.

Unit-II Entity Relationship Model as a tool of conceptual design : Entities & Entity set, Relationship & Relationship set, Attributes, Mapping, Constraints, Keys, Entities-Relationship diagram (E-R diagram) : Strong & weak entities,

Unit-III Relations, Domains, Attributes, Tuple, Concepts of Keys : Candidate key, Primary Key, Alternate Key, Super Key, Foreign Key, Entity integrity, Referential integrity, Relational Algebra : Select, Project, Cross product, Different types of joins i.e. theta join, equi join, natural join, outer join.

Unit-IV Functional Dependencies, Normalization : First, Second, Third & BCNF Normal Forms,

Unit-V Basic concepts of SQL (Structure Query Language) Example based on creating query in SQL. Use of MS-Access Package. Basic Concepts of SQL (Structured Query Language) Enable based on Creating queries in SQL use of MS-Access Package.

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SECOND SEMESTER

Paper 2.2: Basics of Computer Network

Unit –I Needs and Advantages of Network. Structure of the communication Network. Types of Network: LAN, MAN, WAN Protocols. Simplex, Half duplex and Full duplex transmission modes.

UNIT –II Multipoint and point to point line configuration Types of topologies; mesh, Star, Ring, Bus, Tree and Hybrid. Peer to Peer network. Primary Secondary Networks. Concepts of client server computing. Types of servers .

UNIT-III Basic concepts of guided and unguided media. Media Coaxial Cable Twisted pair cable, Untwisted pair cable, optic Fiber cable Wireless Communications. Serial and Parallel transmissions.

UNIT-IV Connection oriented and Connectionless networks, Asynchronous and Synchronous communication. Introduction to ISO/OSI reference Model in brief.

UNIT-V Networking and Internetworking devices and related terms Switch, Hub, Bridge, Router, Gateway. Broadband and Base band Networks TCP/IP Protocol, Wi-Fi network, Wi-max.

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SECOND SEMESTER

Paper 2.3 : Web Designing using HTML and CSS

Unit-I HTML, Text Editors, Tags, Elements, Attributes, Paragraphs, Headings, Links, Images, Lists, Images, tables, Forms, Span and DIVs, Abbreviations, Quotations, Defenitions, Comments, Styling, Classes and ID, IFrames.

Unit-II HTML Forms, Form Elements, Styling Forms, HTML 5 New Elements, Symantics, Migration.

Unit-III Introduction to Cascading, Syntax, Colors, Backgrounds, Margins and Paddings, Heights, Box Model, Outlines, Fonts, Links, Lists, tables, Display, Position, Overflow, Float.

Unit-IV Inline-Block, Align, Combinators, Pseudo Classes, Opacity, Navigation, Rounded Corners, Border radius, Gradients, Shadows, Transitions, Animation, Box-Sizing, Flex-Box.

Unit-V Media Queries, Responsive Web Design, Grid View, Frameworks, Templates.