Choice Based Credit System (CBCS)

Maharaja Ganga Singh University

B.A./B.Com./B.Sc. Vocational Computer Application(VCA)

(Semester System)

2024-25

Undergraduate Programme

(Effective from Academic Year 2024-25)

SYLLABUS
SCHEME OF EXAMINATION AND
COURSES OF STUDY

Preamble

Considering the curricular reforms as instrumental for desired learning outcomes, Maharaja Ganga Singh University made a rigorous attempt to revise the curriculum of postgraduate and undergraduate programs in alignment with the National Education Policy-2020 and UGC Quality Mandate for Higher Education Institutions. The process of revising the curriculum could be prompted by the adoption of the "Comprehensive Roadmap for Implementation of NEP". The roadmap identified the key features of the Policy and elucidated the Action Plan with well-defined responsibilities and an indicative timeline for major academic reforms. The University Grants Commission (UGC) has devised a series of regulations and directives over time with the intention of enhancing the higher education system's quality and enforcing minimum standards in Higher Educational Institutions (HEIs) throughout India. The recent academic reforms suggested by the UGC have contributed to an overarching enhancement of the higher education system.

With NEP-2020 in background, the revised curricula articulate the spirit of the Policy by emphasizing upon- integrated approach to learning; innovative pedagogies and assessment strategies; multidisciplinary and cross-disciplinary education; creative and critical thinking; ethical and constitutional values through value-based courses; 21st century capabilities across the range of disciplines through life skills, entrepreneurial and professional skills; community and constructive public engagement; social, moral and environmental awareness; exposure to Indian knowledge system, cultural traditions and classical literature through relevant courses offering 'Knowledge of India'; fine blend of modern pedagogies with indigenous and traditional ways of learning; flexibility in course choices; student-centric participatory learning; imaginative and flexible curricular structures to enable creative combination of disciplines for study; offering multiple entry and exit points, integration of extracurricular and curricular aspects; exploring internships with local industry, businesses, artists and crafts persons; closer collaborations between industry and higher education institutions for technical, vocational and science programmes; and formative assessment tools to be aligned with the learning outcomes, capabilities, and dispositions as specified for each course. The University has also developed consensus on adoption of Blended Learning with component of online teaching and face to face classes for each programme.

Choice-Based Credit System (CBCS)

The Choice Based Credit System (CBCS), a part of the academic reform process to enhance the quality of education and facilitate the transferability of students from one University/institution to another at the national and international level, provides substantive autonomy to teachers to formulate their own curricula and enable them to introduce innovations in teaching and learning process and upgrade the overall quality of higher education. The CBCS provides scope for Comprehensive and Continuous Evaluation (CCE) of students and encourages them to learn. The CBCS provides a cafeteria-type approach in which the students can take courses of their choice, learn at their own pace, undergo additional courses and acquire more than the required credits, and adopt an interdisciplinary approach to learning.

The grading system is widely regarded as an improvement over the traditional marks system, which is why leading institutions in India and abroad have adopted it. Thus, there's a strong rationale for establishing a consistent grading system. This would facilitate seamless student mobility among institutions within the country and abroad, while also allowing prospective employers to accurately assess students' performances. To achieve the desired standardization in the grading system and the method for

calculating the Cumulative Grade Point Average (CGPA) based on students' examination results, the UGC has devised these comprehensive guidelines.

Outline of Choice-Based Credit System

(https://www.ugc.gov.in/pdfnews/8023719_guidelines-for-cbcs.pdf)

1. **Core Course:** A course, which should compulsorily be studied by a candidate as a core requirement is termed as a Core course.
2. **Elective Course:** Generally a course that can be chosen from a pool of courses and which may be very specific or specialized or advanced or supportive to the discipline/ subject of study or which provides an extended scope or which enables an exposure to some other discipline/subject/domain or nurtures the candidate's proficiency/skill is called an Elective Course.

2.1 **Discipline-Specific Elective (DSE) Course: Elective** courses may be offered by the main discipline/subject of study is referred to as Discipline-Specific Elective. The University/Institute may also offer discipline-related Elective courses of an interdisciplinary nature (to be offered by the main discipline/subject of study).

2.2 **Dissertation/Project:** An elective course designed to acquire special/advanced knowledge, such as supplement study/support study to a project work, and a candidate studies such a course on his own with an advisory support by a teacher/faculty member is called dissertation/project.

2.3 **Generic Elective (GE) Course:** An elective course chosen generally from an unrelated discipline/subject, with an intention to seek exposure is called a Generic Elective. P.S.: A core course offered in a discipline/subject may be treated as an elective by another discipline/subject and vice versa and such electives may also be referred to as Generic Elective.

3. **Ability Enhancement Courses (AEC):** The Ability Enhancement (AE) Courses may be of two kinds: Ability Enhancement Compulsory Courses (AECC) and Skill Enhancement Courses (SEC). "AECC" courses are the courses based upon the content that leads to Knowledge enhancement; i. Environmental Science and ii. English/MIL Communication. These are mandatory for all disciplines. SEC courses are value-based and/or skill-based and are aimed at providing hands-on training, competencies, skills, etc.

3.1 Ability Enhancement Compulsory Courses (AECC): Environmental Science, English Communication/MIL Communication.

3.2 Skill Enhancement Courses (SEC): These courses may be chosen from a pool of courses designed to provide value-based and/or skill-based knowledge.

4. Research Component in Undergraduate Courses

Project work/Dissertation is considered as a special course involving the application of knowledge in solving / analysing /exploring a real-life situation / difficult problem. A Project/Dissertation work would be of 6 credits. A Project/Dissertation work may be given in lieu of a discipline-specific elective paper.

Structure of Programme

B.A./B.Com./B.Sc. Vocational Computer Applications (VCA)

Admission Criteria

Admission rules to the course will be as per Government / University policy declared for undergraduate science programs from time to time.

Teaching and Examination Scheme for
B.A. / B.Com./B.Sc. Vocational Computer Application (VCA)
Session 2024-25
Examination Dec 2024

Semester I										
Paper Code	Paper Name	Code	L	T	P	Total Credits	Maximum Marks		Passing Criteria	
							Internal (I)	External (II)		
VCA4.5AECCT11	(English/Hindi/ MIL)	AECC	2	0	0	2		100		36 Non-CGPA S/NS*
VCA4.5DCCT12	Computer Fundamentals & PC Software	DCC	3	1	0	4	30	80	150	36%
VCA4.5DCCP12	Computer Fundamentals & PC Software Lab	DCC	0	0	2	2		40		36%

Examination June 2025

Semester II										
Paper Code	Paper Name	Code	L	T	P	Total Credits	Maximum Marks		Total Marks	Passing Criteria
							Internal (I)	External (II)		
VCA4.5AECCT21	Environmental Science	AECC	2	0	0	2		100		36 Non-CGPA S/NS*
VCA4.5DCCT22	Database Management System	DCC	3	1	0	4	30	80	150	36%

VCA4.5DCCP22	Database Management System Lab	DCC	0	0	2	2		40		36%

Session 2025-26
Examination Dec 2025

Semester III										
Paper Code	**Paper Name**	**Code**	**L**	**T**	**P**	**Total Credits**	**Maximum Marks**		**Passing Criteria**	
							Internal (I)	**External (II)**		
VCA5AECCT31	Elementary Computer	SDC	2	0	0	2		100		36 Non-CGPA S/NS*
VCA5DCCT32	Programming with C	DCC	3	1	0	4	30	80	150	36%
VCA5DCCP32	Programming with C Lab	DCC	0	0	2	2		40		36%

Examination June 2026

Semester IV										
Paper Code	**Paper Name**	**Code**	**L**	**T**	**P**	**Total Credits**	**Maximum Marks**		Total Marks	**Passing Criteria**
							Internal (I)	**External (II)**		
VCA5AECCT41	Indian Knowledge System	VAC	2	0	0	2		100		36 Non-CGPA S/NS*
VCA5DCCT42	Internet & Web Programming	DCC	3	1	0	4	30	80	150	36%
VCA5DCCP42	Internet & Web Programming Lab	DCC	0	0	2	2		40		36%

Session 2026-27
Examination Dec 2026

Semester V										
Paper Code	**Paper Name**	**Code**	**L**	**T**	**P**	**Total Credits**	**Maximum Marks**		**Passing Criteria**	
							Internal (I)	**External (II)**		
VCA5.5AECCT51	Communication Skill	SDC	2	0	0	2		100		36 Non-CGPA S/NS*
VCA5.5DCCT52	DTP	DCC	3	1	0	4	30	80	150	36%
VCA5.5DCCP52	DTP Lab	DCC	0	0	2	2		40		36%

Examination June 2027

Semester VI										
Paper Code	**Paper Name**	**Code**	**L**	**T**	**P**	**Total Credits**	**Maximum Marks**		Total Marks	**Passing Criteria**
							Internal (I)	**External (II)**		
VCA5.5AECCT61	Special Elective Courses like DPR, IOJ, CEE, RCC	SEC	2	0	0	2		100		36 Non-CGPA S/NS*
Dissertation/Project/Field Study (DPR), Internship or On-Job Experience (IOJ) or Community Engagement Experience (CEE), Research Credit Courses (RCC). # Pass/Fail/Credits would be submitted by the college concerned similar to practical/dissertation										
VCA5.5DCCT62	Web Development: PHP & MYSQL	DCC	3	1	0	4	30	80	150	36%
VCA5.5DCCP62	Web Development: PHP & MYSQL Lab	DCC	0	0	2	2		40		36%

S/NS*=Satisfactory or Unsatisfactory, ** A candidate shall be required to obtain 36% marks to pass in theory, practical and internals separately.

- For Internal Evaluation of 20 Marks overall (no bifurcation into theory and practical)-please decide your criteria (Suggestive: 05 Marks for theory paper, 05 Marks for practical paper, 05 Marks for assignment/ seminar, and 05 Marks for Logical thinking/application of knowledge and skills)
- Each practical exam is to be conducted by two examiners one External and one Internal. The external examiner should be a senior lecturer from the jurisdiction of MGS University. External

Examiner will prepare question paper of Practical Examination. Students have to perform exercises on the computer. Exercise must be written in answer books in proper documentation.

- Bifurcation of 40 marks for Practical paper will be as follows-
  3 practical questions 30 marks each
  Lab File: 5 marks Viva voce: 5 marks

B.A. / B.Com. /B.Sc. Sem-I Examination Dec 2024

Course Code: VCA4.5DCCT12
Type of the course: Discipline Specific Core Course I of Semester I
Title of the Course: Computer Fundamentals & PC Software
Level of the Course: NHEQF Level 4.5
Credit of the Course: 4
Delivery sub-type of the course: Theory 3. Tutorial 1
Pre-requisites and requisites of the course: Student enrolled and registered in UG Programme first semester.

Duration of Exam: 3 Hours
Maximum Marks: 150
Internal Exam: 30 Marks
Theory Exam: 80 Marks
Practical Exam: 40 Marks

Course Content:

Unit – I

Historical Evolution of Computers, Characteristics of computer, Classification of Computer, Modern Computer & its Application; Block diagram and Components of Computer System, Central Processing Unit, Memory Unit, Microprocessor; Interconnecting the Units of a Computer, Inside a Computer Cabinet; Functions and Characteristics of Various commonly used Input/Output Devices; Start-up Process (Booting), Specification of a Desktop and Laptop currently available in the market (Processor, motherboard, memory, interface & capacity of HDD & DVD drives, I/O ports etc).

Unit – II

Need & Types of Software: System & Application software; Programming Languages: Machine, Assembly, High Level, 4GLs, Assemblers, Compilers and Interpreter; Objectives of Operating System, Concept of CUI & GUI; Installation of Windows Operating System, Installation of Printer and Other Software Packages such as Ms Office etc; Backup and Restore Operations. Features of Windows; Various versions of Windows, Desktop, Explorer, Searching, Recycle Bin, Setting common devices using Control Panel, System Tools, Disk cleanup, defragmentation, scanning for virus, Windows Accessories.

Unit – III

Features of Word Processor: Create, edit, store, print documents, Navigation of documents, cut, copy & paste, Find & replace, Different Page Views and layouts, Alignment, formatting features, Tabs & Indents, Inserting tables, pictures, hyperlinks, Spell checking, Macros, Mail merge, Template, Wizards, Overview of Index and Tables. Importing and exporting to and from various formats.

Unit – IV

Features of Spreadsheet: Creating, saving, editing, moving around a worksheet, workbook; Inserting, deleting navigation in worksheets, Working with Formula, Cell reference, Functions (Financial, Database, Maths, Trigonometric, Statistical etc); Creating, editing, selecting and naming range. Format Feature, Changing alignment, Character styles, Date Format, Border & Colors etc. Previewing & Printing a

worksheet, Goal Seeks, Pivot Table, Creating Charts & Graphs. Database in worksheet, Data organization- what-if analysis, Macro, Linking and embedding.

Unit – V

Power Point Presentation Package: Creating Presentation, Different presentation templates, Setting backgrounds, layouts, Customizing, Formatting a presentation, Adding Graphics and effects to the presentation, Printing Handouts, Generating standalone presentation viewer.

Suggested Readings:

1. Computer Fundamental By P.K. Sinha (BPB Publications)
2. Upgrading and Repairing PCs By Scott and Mueller, Techmedia, New Delhi
3. Rapidex MS Office By Vikas Gupta (Pustak Mahal)
4. Absolute Beginners Guide to Computer Basics By Miller M, Pearson Education,
5. Fundamentals of Computers By Balagurusamy E, Tata McGraw-Hill

B.A. / B.Com. /B.Sc. Sem-II Examination June 2025

Course Code: VCA4.5DCCT22
Type of the course: Discipline Specific Core Course I of Semester 2
Title of the Course: Computer Fundamentals & PC Software
Level of the Course: NHEQF Level 4.5
Credit of the Course: 4
Delivery sub-type of the course: Theory 3. Tutorial 1
Pre-requisites and requisites of the course: Student enrolled and registered in UG Programme first semester.

Duration of Exam: 3 Hours
Maximum Marks: 150
Internal Exam: 30 Marks
Theory Exam: 80 Marks
Practical Exam: 40 Marks

Objectives of the course: Course Objectives:
1. To understand the characteristics of computers
2. To know about the generations of computers
3. To have knowledge about computer languages
4. To understand the basics of an operating system
5. To be acquainted with word processor, spreadsheet, and presentation
6. To understand and apply the concept of algorithms and algorithm analysis
7. To know about some unsolved problems of computer science

Course Learning Outcomes:
After completion of this course, the student will be able to -
1. Understanding of the characteristics of computers
2. Know about the generations of computers
3. Having knowledge of computer languages
4. Understanding of the basics of operating system
5. Acquaintance with a word processor, spreadsheet, and presentation
6. Understanding and ability to design algorithms
7. Know about some unsolved problems of computer science

Course Contents

Unit I

Data, Data Processing, Merits and demerits of file organisation. Database Overview, Purpose of the Database system, File systems Vs. Database Systems, View of Data: Data Abstraction, Instances, Schema, Data Models: Overview of Network, Hierarchical, and Relational Model, Database Architecture and Administrators, Codd's Rules.

Unit II

ER Model: Basic Terminology, Entity, Entity sets, attributes and keys, Relation and Relationship sets, Entity-Relationship Diagram, Weak and Strong entity types, Features of E-R Model, Specialization, Generalization Aggregation, Creating table from ER diagram. Basic Concept of Normalization up to BCNF.

Unit III

Implement Database concepts using Access, Creating Tables, Data Types, Entering Data, Table Design, Indexing, Importing Data, Operators and expressions, expression builder, various functions of Access, Import and Export Table, Creating Queries, Setting Relationship between Tables, Creating Forms,

Controls and components of form, Master table and transaction table. Join property, various join options available in access, Creating & Printing Reports.

Unit IV

Query Languages: DDL, DML, DCL, Introduction to SQL, Data Types, Basic SQL commands like Create, Alter, Drop, Truncate, Insert, Update, Delete etc, Basic SQL Queries, Union, Intersect and Except, Nested Queries.

Unit V

Transaction management and Concurrency control,Transaction management: ACID properties, serializability and concurrency control, Lock based concurrency control (2PL, Deadlocks),Time stamping methods, optimistic methods, database recovery management.

Suggested Readings:

1. Database Management System By A. Silberschatz, Henry F.Korth, S. Sudershan (McGraw-Hill)
2. An Introduction to Database System By C.J. Date (Addision Wesley)
3. Fundamentals of DBMS By Gupta, Dhillon, Magho, Sharma (Lakhanpal Publishers)
4. Teach yourself Access. Sieglel, BPB
5. Introduction to Computer Data Processing and System Analysis By V K Kapoor (Sultan Chand and Sons)

B.A. / B.Com. /B.Sc. Sem-III Examination Dec 2025

Course Code: VCA5DCCT32
Type of the course: Discipline Specific Core Course I of Semester III
Title of the Course: Programming with C
Level of the Course: NHEQF Level 5
Credit of the Course: 4
Delivery sub-type of the course: Theory 3. Tutorial 1
Pre-requisites and requisites of the course: Student enrolled and registered in UG Programme third semester.

Duration of Exam: 3 Hours
Maximum Marks: 150
Internal Exam: 30 Marks
Theory Exam: 80 Marks
Practical Exam: 40 Marks

Course Content:

Unit-I

Basic concepts of programming: Characteristic & Implementation of Algorithm, Flow Chart Symbols, Benefit and Limitations; Decision Table, Pseudo Code. Programming Techniques: Top down, Bottom up, Modular, Structured, Features, Merits, Demerits and their Comparative study.

Unit-II

Structure of C Program; Character Set, Tokens, Variable, Constant; Data Types; Operator, Expressions, Type Conversions; Console Input-Output functions; Control Flow Statements and Blocks, Branching statements and Labels.

Unit-III

Loop Structure: While, Do while, For, Modular programming: Basic types of function, Declaration and definition, Function call, Parameter passing, Recursion, Scope of variables, Storage classes.

Unit-IV

Arrays: Declaration and use of Array, Array manipulation; Searching, Insertion, Deletion of an element, Strings as array of characters, Standard library string functions. Pointer: Declaring & Initializing pointers, Accessing a variable and address of a variable, Pointer expressions, Pointers and Function Arguments, Pointers and Arrays,

Unit-V

Structure, Union: Declaration and use. Programs to show the use of structure, union; Concept of Files, Basic Functions for File Handling, Basic Input/Output operations on files.

Suggested Readings:

1. Programming In C By Gottfried (Tata McGraw Hill)
2. C Programming Language By Kernighan (Prentice Hall Of India)
3. C Programming By R.B. Patel, Khanna Publication.
4. Let Us C By Yashwant Kanetkar (BPB Publication)

B.A. / B.Com. /B.Sc. Sem-IV Examination June 2026

Course Code: VCA5DCCT42
Type of the course: Discipline Specific Core Course I of Semester IV
Title of the Course: Internet & Web Programming
Level of the Course: NHEQF Level 5
Credit of the Course: 4
Delivery sub-type of the course: Theory 3. Tutorial 1
Pre-requisites and requisites of the course: Student enrolled and registered in UG Programme third semester.

Duration of Exam: 3 Hours
Maximum Marks: 150
Internal Exam: 30 Marks
Theory Exam: 80 Marks
Practical Exam: 40 Marks

Course Content:

Unit I

Data communication, Transmission Media- Coaxial, UTP, Optical-Fiber, Wireless, Components of Computer Networks, Transmission Mode- Simplex, Half Duplex, Full Duplex, LAN, MAN, WAN, the OSI Model, TCP/IP and others main protocols used on the Web;Types of wireless communication (Mobile, WiFi, WiMAX, Bluetooth, Infrared – concept and definition only). Software Piracy, Firewall, Threats, Hacking and Cracking (basic concepts only for these topics)

Unit II

Evolution of Internet, Introduction to the terms LAN, WAN, MAN, Basic internet terms (Client, Server, MODEM, Web page, Web site, Home page, Browser, URL, ISP, Web server, Download & Upload, Online & Offline etc), Internet applications (Remote login, VoIP, Video Conferencing, Audio-Video streaming, Chatting etc). Identify and solve basic problems related to connecting to networks and the Internet. E-Mail, Advantages, How it's Works? Anatomy of an e-mail Message, basic of sending and receiving, E-mail Protocol.

Unit III

Introduction to World Wide Web: History, Working of Web Browsers, Its functions, Search engine category, Concept of Hyper Text Transfer Protocol (HTTP), Web Servers, Internet Explorer, Web publishing Document Interchange Standard, Component of Web Publishing, Site and Domain Name, Overview of Intranet and its applications.

Unit IV

HTML, Designed Tools, HTML Editors, Issue in Web Site Creations and Maintenance, FTP S/W for Upload Website, Elements of HTML & Syntax, Building HTML Documents, Use of Font Size and Attributes, Backgrounds, Formatting tags, Images, Hyperlinks, div tag, List Type and its Tags, Table Layout, , Use of Frames and Forms in Web Pages. Working with Style sheet: Elements and different Type of style sheet; Introduction to Java Script: Identifier & operator, control structure, functions, Predefined functions, numbers & string functions, Array in Java scripts.

Unit V

Basic of Cyber Security and Cyber Crime: Computer Ethics and Application Programs, Cyber Law, Introduction to IT laws & Cyber Crimes – Internet, Hacking, Cracking, Viruses, Virus Attacks, Software Piracy, Intellectual property, Legal System of Information Technology, Social Engineering, Mail Bombs, Bug Exploits

Suggested Readings:

1. Internet and Web Page Designing By V.K Jain (BPB)
2. Internet & Web Design By A. Mansoor, Pragya Publications.
3. Web Enabled Commercial Application Development Using HTML, DHTML , java script, Perl CGI By Ivan Bayross (BPB)
4. Cyber Security by Nina Godbole & Sunit Belapure
5. Computer Forensics by Marie- Helen Maras

B.A. / B.Com. /B.Sc. Sem-V Examination Dec 2026

Course Code: VCA5DCCT52
Type of the course: Discipline Specific Core Course I of Semester V
Title of the Course: DTP
Level of the Course: NHEQF Level 5.5
Credit of the Course: 4
Delivery sub-type of the course: Theory 3. Tutorial 1
Pre-requisites and requisites of the course: Student enrolled and registered in UG Programme third semester.

Duration of Exam: 3 Hours
Maximum Marks: 150
Internal Exam: 30 Marks
Theory Exam: 80 Marks
Practical Exam: 40 Marks

Course Content:

Unit I

DTP: Importance of D.T.P in Publication, Introduction to PageMaker, Different page format/ Layouts, Tool Box, Styles, Menus, Import and Export Facility, Alignment, Formatting, Filling in Page Maker.

Unit II

Photoshop Environment: Photoshop Interface, Photoshop toolbox and option bar, Graphics basic: Bitmap v/s Vector Based, image resolution, graphic file format; color mode; Photoshop tool: Parts of toolbox, Magic wand, lassos , move tool, crop tool, pencil , eraser tools, brushes, gradient, Pen tool: Photoshop layers: Naming, creating, deleting, viewing, moving, locking, merging layers, blending options.

Unit III

Multimedia: Components of multimedia, Applications, Transition from conventional media to digital media. Usage of text in Multimedia, Digitization of sound, Sound synthesis, MIDI, Compression and transmission of audio on Internet, Image Compression and File Formats like GIF, JPEG, PNG, PDF; Basic Image Processing, Use of image editing software, Video Basics, How Video Works, Overview of Video Compression and File Formats, Video compression based on motion compensation.

Unit IV

Introduction of CorelDraw , The CorelDraw Menus, The Draw Toolbox: Using the Drawing Tools, Using the Zoom Tool, Using the Text Tool, Using Pick Tool, Using node editing (Shape) Tool, Using Fill tool, Arranging Objects:, Layering,Combining and Grouping Objects, Stacking Order, Aligning Objects , Type Casting: Typeface or Font,Types of Typeface, Using and manipulate type in CorelDraw, Using Fonts in your Drawing.

UNIT V

Colour & Fills: Colour Scheme, Colour Models,Using Colour in your document,Using Colour in presentations,Using Fills , Texture and patterns Special Effects, Using Envelops, Using extrude, Using blend, Using Lenses, Using perspective, Rotating and skewing objects with transform Roll-up, Stretching and mirroring , Printing Your Document, Save & Close & open file, Export file

Suggested Readings:

1. Learning Page Maker (BPB)
2. Multimedia making it work By Tay Vaughan, Tata McGraw-Hill.
3. Rajneesh Aggarwal & B. B Tiwari, " Multimedia Systems", Excel Publication, New Delhi

B.A. / B.Com. /B.Sc. Sem-VI Examination June 2027

Course Code: VCA5DCCT52
Type of the course: Discipline Specific Core Course I of Semester VI
Title of the Course: Web Development: PHP & MySQL
Level of the Course: NHEQF Level 5.5
Credit of the Course: 4
Delivery sub-type of the course: Theory 3. Tutorial 1
Pre-requisites and requisites of the course: Student enrolled and registered in UG Programme VI semester.
Duration of Exam: 3 Hours
Maximum Marks: 150
Internal Exam: 30 Marks
Theory Exam: 80 Marks
Practical Exam: 40 Marks

Course Content:

Unit I

INTRODUCTION TO PHP. : History of PHP, Apache Web Server, MySQL and Open Source Relationship between Apache, MySQL and PHP (AMP Module) PHP configuration in IIS and Apache Web server

Unit II

BASICS OF PHP: PHP structure and syntax,Creating the PHP pages ,Rules of PHP syntax, Integrating HTML with PHP , Constants, Variables : static and global variable , Conditional Structure & Looping , PHP Operators , Arrays, foreach loop , User defined function, function arguments, function variables, Return from Function, default argument, variable length argument

Unit III

INTRODUCTION TO MYSQL : MySQL structure and syntax , Types of MySQL tables and storages engines , MySQL commands , Integration of PHP with MySQL , Connection to the MySQL server , Working with PHP and arrays of data , Referencing two tables , Joining two tables

Unit IV

WORKING WITH DATA and PHP FUNCTION: FORM element, INPUT elements, Processing the form User Input , INPUT checkbox type ,one form, multiple processing , Radio INPUT element Multiple submit buttons , Basic input testing , Dynamic page title , Manipulating the string as an array ,Adding items , Validating the user input. Basic PHP Function like Variable Function, String Function, Math Function , Date Function, Array Function , File Function

Unit V

WORKING WITH DATABASE AND PHP FUNCTION: Creating a table, Manipulating the table ,Filling the table with data , Adding links to the table , Adding data to the table , Displaying the new information , Displaying table data , Editing the database , Inserting a record , Deleting a record , Editing data,

Suggested Readings:

(1) Beginning PHP, Apache, MySQL Web Development Elizabeth Naramore, Jason Gerner , Yann Le Scouarnec, Jeremy Stolz, Michael K. Glass, Gary Mailer - By Wrox Publication
(2) PHP, MySQL and Apache - Julie C. Melone By Pearson Education

(3) Beginning PHP 5.3 by Matt Doyle - By Wrox Publication
(4) PHP and MySQL Bible – Tim Converse and Joyce Park with Clark Morgam By Wiley INDIA

Scheme of end-of-semester examination:

The B.A./B.Com./B.Sc. Vocational Computer Application is of VI-semester duration full-time program. The program will have core courses, core electives, skill development, and elective open papers, a dissertation/project/training/review/clinical project/internship/case study in the 6th semester, and a combined practical paper based on theory papers in each semester. The dissertation/project/training/review/clinical project/internship/case study will be evaluated by an external examiner.

1. English shall be the medium of instruction and examination.
2. There will be a semester-end examination. The semester-end examinations, evaluation, publication of results, award of marks statements, and award of diplomas shall be undertaken by MGS University, Bikaner.
3. The system of evaluation shall be as follows:
   - 3.1 The evaluation scheme shall comprise external evaluation and internal evaluation. The internal evaluation will carry 20% marks in each course except DECC. Each theory paper will carry 80 marks. The practical paper will carry 40 marks. Any student who fails to participate in classes, viva voce, or practical work will be debarred from appearing in the end-semester examination.
   - 3.2 The duration of the written examination for each paper shall be of three hours and the Practical examination shall be for one-day duration.
   - 3.3 The minimum attendance required by a candidate will be as per the University rules.
4. Award of degree, grading, scope for improvement/appeal – as per Maharaja Ganga Singh University rules and regulations/ordinances (CBCS/Semester). Pass Criteria
5. For passing in the each theory examination, a candidate is required to obtain 36% marks in all theory papers and 36% marks separately in the practical examination and internal and dissertation.

Pattern of Examination

The question paper shall contain three sections.
Section A (10 marks) shall contain 10 questions two from each Unit. Each question shall be of 1 mark. All the questions are compulsory. Section A will be prepared such that questions i through v are multiple-choice
questions, while questions vi through x will be fill-in-the-blank questions.
Section B (25 marks) shall contain 5 questions (two from each unit with internal choice). Each question shall be of 5 marks. The candidate is required to answer all 5 questions. The answers should not exceed 150 words.
Section C (45 marks) shall contain 5 questions, one from each Unit. Each question shall be of 15 marks. The candidate is required to answer any three questions by selecting these three questions from different units. The answers should not exceed 400 words.

Model Paper

B.A./ B.Com. / B.Sc. Vocational Computer Application

Semester I

Duration: 3 Hours **Maximum Marks: 80**

VCA4.5DCCT12- Computer Fundamentals

Instructions: The question paper shall contain three sections. Section A (10 marks) shall contain 10 questions two from each Unit. Each question shall be of 1 mark. All the questions are compulsory. Section A will be prepared such that questions i through v are multiple-choice questions, while questions vi through x will be fill-in-the-blank questions. Section B (25 marks) shall contain 5 questions (two from each unit with internal choice). Each question shall be of 5 marks. The candidate is required to answer all 5 questions. The answers should not exceed 150 words. Section C (45 marks) shall contain 5 questions, one from each Unit. Each question shall be of 15 marks. The candidate is required to answer any three questions by selecting these three questions from different units. The answers should not exceed 400 words.

Section – A

1. (a) …..…… MCQ from unit 1 ……..……. **[1 x 10 =10]**

(b) ……MCQ from unit 2 ……..

(c) ……MCQ from unit 3 ……..

(d) ……MCQ from unit 4…….

(e) ……MCQ from unit 5…….

(f) ……Fill in the Blank from unit 1……..

(g) ……Fill in the Blank from unit 2…….

(h) ……Fill in the Blank from unit 3…….

(i) ……Fill in the Blank from unit 4…….

(j) ……..Fill in the Blank from unit 5…….

Section - B

2. ……from unit 1…… **[5 x 5=25]**

or

……from unit 1……

3. ……from unit 2…….

or

…….from unit 2…….

4……from unit 3……

or

……..from unit 3…….

5……from unit 4……

or

……..from unit 4…….

6……from unit 5…….

or

……..from unit 5……...

Part - C

[3 x 15=45]

8. ……from unit 1…….

9. ……from unit 2…….

10……from unit 3…….

11. ……..from unit 4……..

12. ……..from unit 5…….