

B.A. / B.Com./B.Sc. Vocational Computer Application
Examination 2019-20-21

B.A./ B.Com./ B.Sc. Part I Session 2018-19
B.A./ B.Com./ B.Sc. Part II Session 2019-20
B.A./ B.Com./ B.Sc. Part III Session 2020-21

B.A. / B.Com./B.Sc. Vocational Computer Application
Examination 2019-20-21

Scheme of Examination

1. PASS CRITERIA

For a pass in the examination, a candidate is required to obtain at least 36% in each paper (Theory, Practical and Project) and 36% marks of total aggregate marks of theory and practical papers separately.

1. CLASSIFICATION OF SUCCESSFUL CANDIDATE

Division	Total Marks
First Division	60% and above
Second Division	Above 48% and below 60%
Pass	Above 36% and below 48%
Fail	Below 36%

3. INSTRUCTIONS TO PAPER SETTER

The question paper contains 3 sections. **Section-A** consists of 10 questions (2 questions from each unit of syllabus). **Section-B** consists of 10 questions (2 questions from each unit of syllabus). **Section-C** consists of 5 questions (1 question from each unit of syllabus).

The word limit of part A, B and C are 50, 200 and 500 respectively

4. BACKLOG

As per University Norms

5. WORKLOAD

At least 3 classes for theory class and 3 classes for practical lab should be assigned per week for each paper.

6. INSTRUCTIONS FOR PRACTICAL EXAMINATION Each practical exam is to be conducted by two examiners one External and one Internal Examiner. External examiner should be senior lecturer from jurisdiction of other universities. Question paper of Practical Examination will be prepared by External. Students have to perform exercise on computer. Exercise must be written in answer books in proper documentation. Marks distribution for Practical of 70 marks is as under

- | | |
|---|----------|
| a) Four Exercise of 10 marks each
(Logic 04, Execution 03, Documentation 03) | 40 Marks |
| b) Viva-Voce | 20 Marks |
| c) Laboratory Exercise File | 10 marks |

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

Examination 2019-20-21

B.A. / B.Com./B.Sc. Part-I

Examination 2019

Paper Code	Paper Name(Theory)	Lec./ week	Tuto/ week	Exam Hours	Max. Marks	Min. Pass. Marks (36%)
Theory Papers						
Paper I	Computer Fundamentals & PC Software	3	1	3	65	23
Paper II	Database Management System	3	1	3	65	23
Total of Theory Papers (PAPER I 65 + PAPER II 65)					130	47
Practical Papers						
Practical		3		3	70	25
Total of Practical Papers					70	25
Grand Total					200	72

B.A. / B.Com. /B.Sc. Part-II

Examination 2020

Paper Name(Theory)		Lect/ ure	Tuto/w eek	Exam Hours	Max Marks	Min. Pass. Marks (36%)
Theory Papers						
Paper I	Programming with C	3	1	3	65	23
Paper II	Internet & Web Programming	3	1	3	65	23
Total of Theory Papers(PAPER I 65 + PAPER II 65)					130	47
Practical Papers						
Practical		3		3	70	25
Total of Practical Papers					70	25
Grand Total					200	72

B.A. / B.Com./B.Sc. Vocational Computer Application
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B.A. / B.Com. /B.Sc. Part-III
Examination 2021

Paper Name(Theory)		Lect/ week	Tuto/ week	Exam Hours	Max Marks	Min. Pass. Marks (36%)
Paper I	DTP	3	1	3	65	23
Paper II	Web Development : PHP & MYSQL	3	1	3	65	23
Total of Theory(PAPER I 65 + PAPER II 65)					130	47
Paper Name (Practical)						
Practical		3		3	70	25
Total of Practical					70	25
Grand Total					200	72

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

Examination 2019-20-21

Paper : BA/BCom/BSc Part I Paper-I

Paper Name : COMPUTER FUNDAMENTALS & PC SOFTWARE

Scheme of Examination

Maximum Marks: 65

Duration: 3 Hours

Minimum Passing Marks: 23

The question paper contains 3 sections. Section-A consists of 10 questions (2 questions from each unit of syllabus). Section-B consists of 10 questions (2 questions from each unit of syllabus). Section-C consists of 5 questions (1 question from each unit of syllabus).

The word limit of part A, B and C are 50, 200 and 500 respectively.

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 Seek, 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 By Wiley INDIA

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

Examination 2019-20-21

Paper Code: BA/BCom/BSc Part I Paper-II

Paper Name : Database Management System

Scheme of Examination

Maximum Marks: 65

Duration: 3 Hours

Minimum Passing Marks: 23

The question paper contains 3 sections. Section-A consists of 10 questions (2 questions from each unit of syllabus). Section-B consists of 10 questions (2 questions from each unit of syllabus). Section-C consists of 5 questions (1 question from each unit of syllabus).

The word limit of part A, B and C are 50, 200 and 500 respectively.

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 (Addison 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. Vocational Computer Application

Examination 2019-20-21

Paper Code: BA/BCom/BSc Part II Paper-I

Paper Name : Programming with C

Scheme of Examination

Maximum Marks: 65

Duration: 3 Hours

Minimum Passing Marks: 23

The question paper contains 3 sections. Section-A consists of 10 questions (2 questions from each unit of syllabus). Section-B consists of 10 questions (2 questions from each unit of syllabus). Section-C consists of 5 questions (1 question from each unit of syllabus).

The word limit of part A, B and C are 50, 200 and 500 respectively.

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. Vocational Computer Application

Examination 2019-20-21

Paper Code: BA/BCom/BSc Part II Paper-II

Paper Name : Internet and Web Programming

Scheme of Examination

Maximum Marks: 65

Duration: 3 Hours

Minimum Passing Marks: 23

The question paper contains 3 sections. Section-A consists of 10 questions (2 questions from each unit of syllabus). Section-B consists of 10 questions (2 questions from each unit of syllabus). Section-C consists of 5 questions (1 question from each unit of syllabus).

The word limit of part A, B and C are 50, 200 and 500 respectively.

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. Vocational Computer Application

Examination 2019-20-21

Paper Code: BA/BCom/BSc Part III Paper-I

Paper Name : DTP

Scheme of Examination

Maximum Marks: 65

Duration: 3 Hours

Minimum Passing Marks: 23

The question paper contains 3 sections. Section-A consists of 10 questions (2 questions from each unit of syllabus). Section-B consists of 10 questions (2 questions from each unit of syllabus). Section-C consists of 5 questions (1 question from each unit of syllabus).

The word limit of part A, B and C are 50, 200 and 500 respectively.

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. Vocational Computer Application

Examination 2019-20-21

Paper Code: BA/BCom/BSc Part III Paper-II

Paper Name : Web Development & PHP MYSQL

Scheme of Examination

Maximum Marks: 65

Duration: 3 Hours

Minimum Passing Marks: 23

The question paper contains 3 sections. Section-A consists of 10 questions (2 questions from each unit of syllabus). Section-B consists of 10 questions (2 questions from each unit of syllabus). Section-C consists of 5 questions (1 question from each unit of syllabus).

The word limit of part A, B and C are 50, 200 and 500 respectively.

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