

Kanya Maha Vidyalaya, Jalandhar (Autonomous)

SCHEME AND CURRICULUM OF EXAMINATIONS OF THREE YEAR DEGREE PROGRAMME

Bachelor of Arts / Bachelor of Science (Economics)

COMPUTER APPLICATIONS (VOCATIONAL)

Session 2026-27

Bachelor of Arts / Bachelor of Science (Economics) Semester-III											
Program Name	Course Code	Course Title	Course Type	Hours per week	Credit		Marks			Examination Time (in Hours)	
				L-T-P	L-T-P	Total	Total	Ext.			CA
								L	P		
Bachelor of Arts Sem- III	BARM-3124	Computer Applications (Vocational)	E	3-0-2	3-0-1	4	100	40	30	30	3+3
Bachelor of Science (Economics)- Sem III	BECM-3124	(Operating System)	E								

Bachelor of Arts / Bachelor of Science (Economics) Semester-IV											
Program Name	Course Code	Course Title	Course Type	Hours per week	Credit		Marks			Examination Time (in Hours)	
				L-T-P	L-T-P	Total	Total	Ext.			CA
								L	P		
Bachelor of Arts Sem- IV	BARM-4124	Computer Applications (Vocational)	E	3-0-2	3-0-1	4	100	40	30	30	3+3
Bachelor of Science (Economics)- Sem IV	BECM-4124	(Database Management Systems)	E								

Kanya Maha Vidyalaya, Jalandhar (Autonomous)

SCHEME AND CURRICULUM OF EXAMINATIONS OF THREE YEAR DEGREE PROGRAMME

Bachelor of Arts / Bachelor of Science (Economics)

COMPUTER APPLICATIONS (VOCATIONAL)

Session 2026-27

Bachelor of Arts Honours / Bachelor of Science (Economics) Hons. Semester V											
Program Name	Course Code	Course Title	Course Type	Hours per week	Credit		Marks			Examination Time (in Hours)	
				L-T-P	L-T-P	Total	Total	Ext.			C A
								L	P		
Bachelor of Arts Sem- V	BARM-5124	Computer Applications (Vocational)	DSC	3-0-2	3-0-1	4	100	40	30	30	3+3
Bachelor of Science (Economics)- Sem V	BECEM-5124	(Web Designing and Development)	DSC								

Bachelor of Arts Honours/ Bachelor of Science (Economics) Hons. Semester VI											
Program Name	Course Code	Course Title	Course Type	Hours per week	Credit		Marks			Examination Time (in Hours)	
				L-T-P	L-T-P	Total	Total	Ext.			CA
								L	P		
Bachelor of Arts Sem- VI	BARM-6124	Computer Applications (Vocational)	DSC	3-0-2	3-0-1	4	100	40	30	30	3+3
Bachelor of Science (Economics)- Sem VI	BECEM-6124	(E-Business and Digital Marketing)	DSC								

Bachelor of Arts / Bachelor of Science(Economics) Semester I

Session 2026-27

COURSE CODE: BARM-1124
BECM-1124

**COMPUTER APPLICATIONS (VOCATIONAL)
(COMPUTER FUNDAMENTALS ANDPC SOFTWARE)**

Course Outcomes:

After passing this course the student will be able to:

CO1: comprehend about computer hardware, operating system concepts and various system software.

CO2: Identify various input, output and memory devices.

CO3: Apply office automation software to create professional and academic documents.

CO4: Apply skills to make effective presentations and spreadsheets using associated application software.

Bachelor of Arts / Bachelor of Science(Economics) Semester I

Session 2026-27

**COURSE CODE: BARM-1124
BECM-1124**

**COMPUTER APPLICATIONS (VOCATIONAL)
(COMPUTER FUNDAMENTALS AND PC SOFTWARE)
(THEORY)**

Examination Time: 3 Hrs.

Max. Marks: 100

L-T-P: 3-0-1

Theory: 40

Credits: 4

Practical: 30

CA: 30

Instructions for Paper Setter -

Eight questions of equal marks (08 marks each) are to be set, two in each of the four sections (A-D). Questions of Sections A-D should be set from Units I-IV of the syllabus respectively. Questions may be divided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each section. The fifth question may be attempted from any section.

UNIT I

Fundamentals of Computer: Introduction to computer, Generations of Computers, Classification of Computers, Applications of computer, Components of computers (Input unit, Output Unit, Memory Unit & CPU), type of Software, Translators (compiler, interpreter, assembler), Booting a System.

UNIT II

Input and Output Devices: Keyboards, Mouse, Joystick, Track Ball, Light Pen and Data Scanning devices (scanner, OCR, OMR, MICR, Bar Code Reader, Card Reader), Monitor, Printers (laser printer, dot matrix printer, ink jet printer).

Memories: Concept of storage units (bit, byte, KB, MB etc.), Primary Memory-RAM and ROM. Secondary Memory- Magnetic storage devices, and Optical Storage Devices.

Operating System: meaning, purpose, Windows GUI, Command-line, Powershell overview. File Explorer

UNIT III

Word Processing: Introduction to word, Parts of window of word (Title bar, menu bar, status bar, and ruler), understanding the Ribbon, Use of Office Button and Quick Access Toolbar, Creation of new documents, opening document.

Formatting pages, paragraphs and sections, indents and outdents, creating lists and numbering. headings, styles, fonts and font size; editing, positioning, and viewing texts; finding and

replacing text; inserting page breaks, page numbers, bookmarks, symbols, and dates; using tables, header, footer, macros, mail-merge; printing setup

UNIT IV

PowerPoint Presentation: Introduction to PowerPoint, starting a new slide, creating, opening and saving presentation, moving/rearranging slides, printing slides.

Applying theme to presentation, Views (slide View, slide sorter, notes view, outline view), Formatting & enhancing text formatting.

Creating a graph, displaying slide show, adding multimedia. Slide transitions, applying Animation, Timing slide display, adding movies & sounds.

Spreadsheets using MS Excel: Spreadsheet overview, Editing, Formatting, freeze panes, using formulas and functions, sorting and filtering, pivot tables, charts and Graphs.

References:

1. Anshuman Sharma, A book of Fundamentals of Information Technology, Lakhanpal Publishers, 5th Edition.
2. Prof. Satish Jain, M. Geetha, Kratika, BPB's Office 2010 Course Complete Book, BPB Publications, 2017.
3. Joyce Cox, Joan Lambert and Curtis Frye, Microsoft office Professional 2010 Step by Step, Microsoft Press, 2010.
4. V. Rajaraman, Neeharika Adabala, Fundamentals of Computers, PHI Learning, 2015.
5. P.K. Sinha, Computer Fundamentals, BPB Publications, 2004.

Note: The latest editions of the books should be followed.

Bachelor of Arts / Bachelor of Science(Economics) Semester I

Session 2026-27

**COURSE CODE: BARM-1124
BECM-1124**

**COMPUTER APPLICATIONS (VOCATIONAL)
(COMPUTER FUNDAMENTALS AND PC SOFTWARE)
(PRACTICAL)**

Examination Time: 3 Hrs.

Max. Marks: 100

L-T-P: 3-0-1

Theory: 40

Credits: 4

Practical: 30

CA: 30

Instructions for the examiners: - Two questions of equal marks strictly as per the syllabus and based on the practical exercises covered in the semester. Questions may be subdivided into parts (not exceeding four). Candidates will attempt ONE question, explain their answer by writing on the answer sheet, and then implement the same on the computer. Examiner will evaluate both the answers (theory as well as practical). The viva should also be conducted alongside, and the student is asked viva questions related to the question and the solution he/she is working on during the exam.

Students will prepare a report after analyzing print and social media advertisements along with the local market survey to understand the desktop/laptop vendors and prices. Arrange the options available as per price/performance preferences.

Lab exercises based on:

- Practice the Windows Operating System command line and the GUI for user interaction, personalization, and file management
- Document preparation with Word using the features mentioned in the syllabus
- Presentation preparation with PowerPoint using the features mentioned in the syllabus
- Spreadsheet preparation with Excel using the features mentioned in the syllabus

Bachelor of Arts / Bachelor of Science (Economics) Semester II

(Session 2026-27)

**COURSE CODE: BARM-2124
BECM-2124**

**COMPUTER APPLICATIONS (VOCATIONAL)
(INTRODUCTION TO PROGRAMMING USING PYTHON)**

Course Outcomes:

After passing this course the student will be able to:

CO1: Comprehend the working of various programming constructs involved in Python Programming.

CO2: Apply various operators and control sequence of program using various control statements.

CO3: Apply programming concepts such as list, tuples, dictionaries, functions and strings to provide solution in different problem domains.

CO4: Perform debugging and exception handling.

Bachelor of Arts / Bachelor of Science(Economics) Semester II

Session 2026-27

COURSE CODE: BARM-2124
BECM-2124

**COMPUTER APPLICATIONS (VOCATIONAL)
(INTRODUCTION TO PROGRAMMING USING PYTHON)**

Examination Time: 3 Hrs.

Max. Marks: 100

Theory: 40

L-T-P: 3-0-1

Practical: 30

Credits: 4

CA: 30

Instructions for Paper Setter -

Eight questions of equal marks (08 marks each) are to be set, two in each of the four sections (A-D). Questions of Sections A-D should be set from Units I-IV of the syllabus respectively. Questions may be divided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each section. The fifth question may be attempted from any section.

UNIT I

Problem Solving, Problem Analysis, Concept of writing an algorithm, drawing a flowchart, developing a program.

Introduction to Python: Python's features, Story behind the name, Python versions, Execution environments: the Python Interpreter and IDEs (e.g. PyCharm or VSCode), Getting and Setting up Python.

Python program structure: Writing your first "Hello World" program; creating, saving and executing a program; comments, Indentation.

UNIT II

Data and Expressions: Literal Constants, numbers, strings – immutable strings, quotes, the escape sequence, the format methods. Variables and Identifiers, data-types, object,

Operators & Expressions: shortcuts, evaluation order, Boolean Expressions (Conditions), Logical Operators. User Input/output.

Control Flow: Selection Control, Nested conditions, Loops, break and Continue Statements, Data Structures: list, tuple, dictionary and set; basic operations e.g. creating, indexing, slicing, membership

UNIT III

Functions: defining and calling functions, passing and returning values, local and global variables, recursive functions, Iteration vs. Recursion.

Modules: purpose and usage, the import statement, from – import statement, the `__main__` attribute, creating a module and importing, the `dir()` function.

Handling Exceptions: try..catch and with statements, errors, debugging.

UNIT IV

Files and Strings: Opening Files, Using Text Files, Reading files, Writing files, Understanding read functions, Understanding write functions.

Introduction to numpy and pandas for data processing.

References:

1. Yashavant Kanetkar, Aditya Kanetkar, Let Us Python-6th Edition, BPB Publications.
2. Charles Dierbach, Introduction to Computer Science Using Python: A Computational Problem-Solving Focus, Wiley Publications.
3. Martin C. Brown, Python: The Complete Reference, Indian Edition, McGraw Hill Education (India) Private Limited
4. Mark J. Guzdial, Introduction to Computing and Programming in Python, Pearson Education.

Note: The latest editions of the books should be followed.

Bachelor of Arts / Bachelor of Science(Economics) Semester II

Session 2026-27

**COURSE CODE: BARM-2124
BECM-2124**

**COMPUTER APPLICATIONS (VOCATIONAL)
(INTRODUCTION TO PROGRAMMING USING PYTHON) (PRACTICAL)**

Examination Time: 3 Hrs.

Max. Marks: 100

L-T-P: 3-0-1

Theory: 40

Credits: 4

Practical: 30

CA: 30

Instructions for the examiners: - Two questions of equal marks strictly as per the syllabus and based on the practical exercises covered in the semester. Questions may be subdivided into parts (not exceeding four). Candidates will attempt ONE question, explain their answer by writing on the answer sheet, and then implement the same on the computer. Examiner will evaluate both the answers (theory as well as practical). The viva should also be conducted alongside, and the student is asked viva questions related to the question and the solution he/she is working on during the exam.

Programming exercises based on:

- Use the Python interactive interpreter
- Getting familiar with a Python IDE
- Python fundamentals, data types, operators
- Operators, flow control using if, else and elif, While statement, loops using For, Loop Patterns
- Implementation of different collections like list, tuple and dictionary and their various functions
- Demonstrating creation of functions, passing parameters and return values
- Working with modules
- Handling Exceptions
- Implementation of reading, writing and organizing files
- Basic numpy and pandas functions

Bachelor of Arts / Bachelor of Science(Economics) Semester III

Session 2026-27

COURSE CODE: BARM-3124
BECM-3124

**COMPUTER APPLICATIONS (VOCATIONAL)
(OPERATING SYSTEM)**

Course Outcomes:

After passing this course the student will be able to:

CO1: Compare different types of operating systems and analyze CPU scheduling algorithms.

CO2: Analyze memory management policies, threads and synchronization processes.

CO3: Comprehend about virtual memory and deadlock along with its prevention and detection.

CO4: Comprehend about disk scheduling, security and protection in Operating System.

Bachelor of Arts / Bachelor of Science(Economics) Semester III

Session 2026-27

COURSE CODE: BARM-3124
BECM-3124

**COMPUTER APPLICATIONS (VOCATIONAL)
(OPERATING SYSTEM)
(THEORY)**

Examination Time: 3 +3 Hrs.

Max. Marks: 100

L-T-P: 3-0-1

Theory: 40

Credits: 4

Practical:30

CA: 30

Instructions for Paper Setter -

Eight questions of equal marks (10 marks each) are to be set, two in each of the four sections (A-D). Questions of Sections A-D should be set from Units I-IV of the syllabus respectively. Questions may be divided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each section. The fifth question may be attempted from any section.

UNIT-I

Introduction: Definition, Early Systems, Simple Batch system, Multi-programming/Multi-Tasking, Time Sharing Systems, Personal Computer System, Parallel Systems, Distributed Systems, Real-time Systems.

Processes: Process concept, Inter Process communication, Process Scheduling, Threads. CPU-Scheduling: Basic concepts, Scheduling Criteria, Scheduling Algorithms, Algorithm Evaluation.

UNIT-II

Process Synchronization: Critical-section problem, semaphores, classical problem of synchronization. Semaphores

Threads: Multicore Programming, Multithreading Models, Thread Libraries, Implicit Threading, Threading Issues.

Memory Management: Background, Logical v/s Physical address space, swapping, continuous allocation, paging, segmentation.

UNIT-III

Virtual Memory: Background, demand paging, performance of demand paging, page replacement, page replacement algorithms, thrashing.

Deadlocks: System Model, Deadlock characterization, methods for handling deadlocks, Deadlocks Prevention, Deadlock avoidance, Deadlock detection, Recovery from deadlock, combined approach to deadlock handling.

UNIT-IV

Disk Scheduling: Seek Time, Rotational Latency, Transfer Time, Algorithms.

Operating System Security: authentication & authorization, file ownership and user groups, Access Control, password vulnerabilities, strong passwords,

Protection against breaches: Operating System protection from security breaches such as runaway processes (denial of service), memory-access violations, stack overflow violations, the launching of programs with excessive privileges. Protecting against viruses and worms.

CASE STUDY: Windows Operating System, Linux.

References:

1. AviSilberschatz, Peter Baer Galvin, Greg Gagne, Operating System Concepts, Wiley, 2013.
2. Charles Crowley, Operating Systems: A Design-Oriented Approach, Tata McGraw Hill, 2001.
3. Deitel, An Introduction to Operating Systems, Second Edition, Addison Wesley, 1990.
4. William Stallings, Operating Systems: Internals and Design Principles, Pearson Education Limited, 2014.
5. Anshuman Sharma, Fundamentals of Operating System, Lakhanpal Publishers, 2nd Edition.

Note: The latest editions of the books should be followed.

Bachelor of Arts / Bachelor of Science(Economics) Semester III

Session 2026-27

**COURSE CODE: BARM-3124
BECM-3124**

**COMPUTER APPLICATIONS (VOCATIONAL)
(OPERATING SYSTEM)
(PRACTICAL)**

Examination Time: 3 +3 Hrs.

Max. Marks: 100

L-T-P: 3-0-1

Theory: 40

Credits: 4

Practical: 30

CA: 30

Practical based on Operating System.

Bachelor of Arts / Bachelor of Science(Economics) Semester IV

(Session 2026-27)

COURSE CODE: BARM-4124
BECM-4124

**COMPUTER APPLICATIONS (VOCATIONAL)
(DATABASE MANAGEMENT SYSTEMS)**

Course Outcomes:

After passing course the student will be able to:

CO1: Understand data, database and database models.

CO2: Gain knowledge of keys, normalization and relational algebra.

CO3: Create, manage, access and recover databases.

CO4: Comprehend strategies for backup and recovery of databases.

Bachelor of Arts / Bachelor of Science(Economics) Semester IV

(Session 2026-27)

COURSE CODE: BARM-4124
BECM-4124

**COMPUTER APPLICATIONS (VOCATIONAL)
(DATABASE MANAGEMENT SYSTEMS)**

(THEORY)

Examination Time: 3 +3 Hrs.

Max. Marks: 100

Theory: 40

L-T-P: 3-0-1

Practical:30

Credits: 4

CA: 30

Instructions for Paper Setter -

Eight questions of equal marks (10 marks each) are to be set, two in each of the four sections (A-D). Questions of Sections A-D should be set from Units I-IV of the syllabus respectively. Questions may be divided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each section. The fifth question may be attempted from any section.

UNIT-I

Introduction to Databases: Overview of databases and DBMS, History and evolution of database systems.

Types of Databases: Relational, NoSQL, Object-oriented. Relational model concepts: tables, rows, columns. Comparison of database models (Hierarchical, Network, Relational). Entity-Relationship (ER) Modeling: Introduction to ER diagrams, Entities, attributes, relationships, designing a database using ER model.

UNIT-II

Relational Database Design: Converting ER diagrams to relational schemas. Relational integrity constraints.

Understanding keys: Primary, Foreign, Composite.

Normalization: 1NF, 2NF, 3NF, BCNF.

Relational Algebra: operators like selection, projection, cartesian product, join and write queries using them.

UNIT-III

SQL Statements: DDL, DML, DCL, TCL, constraints, Join methods & Sub query, Union, Intersection, Built in Functions, View, and Security amongst users, indexing object and Common Table Expressions (CTEs).

Concurrency Control: Introduction, Concurrency control with locking methods, Two Phase locking, Precedence graph, Concurrency control based on timestamp ordering, Concurrency control based on optimistic scheduling.

Recovery: Introduction, Recovery Techniques: Log Based Recovery and Shadow Paging.

UNIT-IV

Database Security: Understanding database security concepts, User roles and permissions, Data encryption and access control measures.

Backup, Recovery, and Maintenance: Strategies for database backup and recovery, Disaster recovery planning, Regular maintenance practices for databases.

References:

1. Silberschatz, Korth&Sudarshan, Database Systems Concepts, McGraw-Hill Inc.(2020), 7th edition.
2. C.J. Date, An Introduction of Database System, Addison-Wesley Publishing co. (2003), 8th edition.
3. Anshuman Sharma, Fundamentals of DBMS, Lakhanpal Publishers (2016), 4th edition.
4. Ivan Bayross, SQL/PL/SQL. The Programming Language of Oracle, BPB Publications(2010), 4th edition.
5. RamezElmasri and ShamkantNavathe, Fundamentals of Database Systems, Pearson Education (2015), 7th edition.
6. P.S. Gill, Database Management Systems, Dreamtech Press (2019), 2th edition.

Bachelor of Arts / Bachelor of Science(Economics) Semester IV

(Session 2026-27)

COURSE CODE: BARM-4124

BECM-4124

COMPUTER APPLICATIONS (VOCATIONAL)

(DATA BASE MANAGEMENT SYSTEMS)

(PRACTICAL)

Examination Time: 3 +3 Hrs.

Max. Marks: 100

Theory: 40

L-T-P: 3-0-1

Practical:30

Credits: 4

CA: 30

Practical on Database Management System.

Bachelor of Arts / Bachelor of Science(Economics) Semester V

Session 2026-27

COURSE CODE: BARM-5124

BECM-5124

**COMPUTER APPLICATIONS (VOCATIONAL)
(Web Designing and Development)**

Course Outcomes:

After passing course the student will be able to:

CO1: Comprehend the basics of web designing and development through application of HTML.

CO2: Apply CSS and Bootstrap for generating web pages with responsive design.

CO3: Apply JavaScript to add dynamicity to the webpages.

CO4: comprehend advanced JavaScript concepts and process of web optimization.

Bachelor of Arts / Bachelor of Science(Economics) Semester V

Session 2026-27

**COURSE CODE: BARM-5124
BECM-5124**

**COMPUTER APPLICATIONS (VOCATIONAL)
(Web Designing and Development)
(THEORY)**

Examination Time: 3 Hrs.

Max. Marks: 100

L-T-P: 3-0-1

Theory: 40

Credits: 4

Practical: 30

CA: 30

Instructions for the Paper Setters: –

Eight questions of equal marks (10 marks each) are to be set, two in each of the four sections (A-D). Questions of Sections A-D should be set from Units I-IV of the syllabus respectively. Questions may be divided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each section. The fifth question may be attempted from any section.

UNIT-I

Introduction to Web Design and Development: Overview of web technologies and the web development process, Understanding the difference between web design and development.

Introduction to HTML: Basics: Structure of an HTML document, Common HTML elements (headings, paragraphs, lists, links, images, Tables, Linking, Frames, Forms), Semantic HTML and its importance, Introduction to DOM.

UNIT-II

CSS Fundamentals: Introduction to CSS and its role in web design, CSS selectors, properties, and values, Box model, layout techniques (flexbox, grid).

Responsive Design: Principles of responsive web design, Media queries and breakpoints, using frameworks like Bootstrap for responsive layouts.

UNIT-III

JavaScript Basics: Introduction to JavaScript and its role in web development.

Basic Programming Techniques & Constructs: Variables, data types, functions, and control structures, Operators, Functions, GET/POST Methods, DOM Manipulation & Event handling.

UNIT-IV

Forms Validation, Cookies, Inter-page communication and form data handling using JavaScript.

Web Performance Optimization: Techniques for optimizing website performance, using tools to analyze website performance, Importance and usage of SEO (Search Engine Optimization).

References/Textbooks:

1. Jon Duckett, HTML and CSS: Design and Build Websites
2. Jon Duckett, JavaScript and J Query: Interactive Front-End Web Development"
3. Jennifer Niederst Robbins, Learning Web Design: A Beginner's Guide to HTML, CSS, JavaScript, and Web Graphics
4. Ben Frain, Responsive Web Design with HTML5 and CSS
5. Ethan Brown, Web Development with Node and Express
6. Terry Felke-Morris, Web Development and Design Foundations with HTML5, McGraw Hill
7. Jon Duckett, Beginning HTML, XHTML, CSS, and JavaScript, Cengage 8. Luke Welling and Laura Thomson, PHP and MySQL Web Development, Pearson Education

Bachelor of Arts / Bachelor of Science(Economics) Semester V

Session 2026-27

COURSE CODE: BARM-5124
BECM-5124

**COMPUTER APPLICATIONS (VOCATIONAL)
(Web Designing and Development)
(PRACTICAL)**

Examination Time: 3 Hrs.

Max. Marks: 100

L-T-P: 3-0-1

Theory: 40

Credits: 4

Practical: 30

CA: 30

Programming exercises based on:

- Exploring Web Technologies and Setting up the Development Environment (e.g. Visual Studio Code)
- Creating HTML Documents using headings, paragraphs, lists, links, and images
- Advanced HTML Elements (create forms), applying CSS styles, understanding Box model, Layout techniques
- Integrate Bootstrap into the project and use its grid system to create a responsive layout
- Basic JavaScript programming: GET/POST methods, DOM Manipulation, Event handling, Form validation, working with cookies
- Analyze the performance of the developed webpage using tools like Google Page Speed Insights and Understanding basic SEO

Bachelor of Arts / Bachelor of Science(Economics) Semester VI

(Session 2026-27)
COURSE CODE: BARM-6124
BECM-6124

COMPUTER APPLICATIONS (VOCATIONAL)
(E-BUSINESS and Digital Marketing)

Course Outcomes:

After passing course the student will be able to:

CO1: Identify applications and models of E-Business.

CO2: Comprehend the role of CRM in E-Commerce.

CO3: Develop and analyze strategies in E-Business as well as understand process of procurement and payment.

CO4: Comprehend about ethical, legal and social issues of E-Business.

Bachelor of Arts / Bachelor of Science(Economics) Semester VI

(Session 2026-27)

**COURSE CODE: BARM-6124
BECM-6124**

**COMPUTER APPLICATIONS (VOCATIONAL)
(E-BUSINESS and Digital Marketing)**

Examination Time: 3 Hrs.

Max. Marks: 100

L-T-P: 3-0-1

Theory: 40

Credits: 4

Practical: 30

CA: 30

Instructions for the Paper Setters:–

Eight questions of equal marks (10 marks each) are to be set, two in each of the four sections (A-D). Questions of Sections A-D should be set from Units I-IV of the syllabus respectively. Questions may be divided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each section. The fifth question may be attempted from any section.

UNIT–I

Introduction to E-Business and E-Commerce: Definition and scope of e-business, Evolution and history of e-business, Introduction to E-commerce, Difference between e-business and e-commerce, Advantages and challenges of e-business.

E-Business Models: B2B, B2C, C2C, C2B, B2G. Case studies of successful e-business models. Revenue models in e-business (advertising, subscription, transaction fee, sales, affiliate).

E-Business Applications: E-Tourism, Employment and Job Market Online, Online Real Estate, Online Publishing and e-Books, Online Banking and Personal Finance, On-Demand Delivery Systems and E- Grocers, Online Delivery of Digital Products.

UNIT–II

E-Marketing and Customer Relationship Management (CRM): Digital marketing strategies for E-business, SEO, SEM, and online advertising, Social media marketing and content marketing, Email marketing and customer engagement, CRM systems and their role in e-business.

E-Marketplaces: Introduction, Functions and features, types of e-Marketplaces. Auctions, characteristics and various types of auctions. Benefits, limitations and impacts of auctions.

E-Commerce in the wireless environment. E-commerce platforms and tools (Shopify, Magento, Woo Commerce, etc.)

M-Commerce: Definition, advantages, types, examples and market trends.

UNIT–III

E-Business Strategy and Planning: Developing an E-business strategy, E-business planning process, SWOT analysis for e-business, E-business project management, Metrics and KPIs for e-business performance.

E-Procurement and E-Payment Systems: E-Procurement definition, processes, methods and benefits, Categories and users of smart cards, Payment methods, Payment gateways and online payment systems, Security issues in e-business.

UNIT–IV

Legal, Ethical, and Social Issues in E-Business: Legal aspects of e-business (contracts, consumer protection, data privacy), Ethical issues in e-business (intellectual property, digital rights management), Social implications of e-business (digital divide, impact on employment), Case studies of legal and ethical dilemmas in E-business. Future Trends in E-Business.

References / Textbooks:

- Turban, E. et al., Electronic Commerce: A Managerial Perspective, Prentice Hall.
- Dave Chaffey, Electronic Business and Electronic Commerce Management, 2nd edition, Prentice Hall
- Horton and Horton, E-Learning Tools and Technologies, Wiley Publishing.
- Kamlesh K. Bajaj & Debjani Nag, E – Commerce – The Cutting Edge of Business
- Meier, & H. Stormer, E-Business & e-Commerce: managing the digital value chain, Springer Science & Business Media.

Bachelor of Arts / Bachelor of Science(Economics) Semester VI

Session 2026-27

COURSE CODE: BARM-6124
BECM-6124

**COMPUTER APPLICATIONS (VOCATIONAL)
(E-BUSINESS and Digital Marketing)**

Examination Time: 3 Hrs.

Max. Marks: 100

L-T-P: 3-0-1

Theory: 40

Credits: 4

Practical: 30

CA: 30

Lab exercises based on:

1. Set up a basic website using Word Press and Optimize website content for SEO (Meta tags, keyword research, URL optimization , Header tags etc.).
2. Analyze website performance using Google Analytics. Conduct keyword research using tools like Google Keyword Planner, Chat GPT, Keyword Generator, Google Search Console, Google Trends. Perform an SEO audit for a website and recommending improvements.
3. Set up a Google Ads campaign (App, Display, Local, Performance Max, Search, Smart, Shopping, and Video).Create compelling ad copy and selecting relevant keywords. Analyze PPC campaign performance and adjusting bidding strategies like Target Cost Per Acquisition (CPA), Maximize Conversions, Enhanced Cost Per Click (ECPC), Maximize Clicks .
4. Develop a social media advertising campaign on Facebook with a social media post and perform facebook promotion using banners. Analyze the engagement metrics such as Activation rate, Number of active users, Retention rate, Churn rate, Conversion rate.
5. Create a YouTube channel for marketing.
6. Choose Mail chimp as the Email marketing platform, Build a contact list in Mail Chimp, Create a Campaign and build an Email, Develop the Header and body of email campaign, Enable Auto Responder performance and Tracking, Conduct A/B Testing of Emails and Start the E-Mail Marketing campaign.