



Department of Commerce & Management Program:

IV SEM – M.Com

Subject – Production and Operations Management

Syllabus

UNIT	Content	Hours Allotted
I	Introduction: Nature of Production, Production as a System, Evolution of Production Function, Production as an Organizational Function, Decision Making in Production, Importance of Production Management and Operation Management, Characteristics of Modern Production and Operation Function..	8
II	Industrial Location and Facility Layout: Introduction, Location Theories, Freedom of Location, Errors in Selection, Steps in Location Selection, Relative Importance of Location Factors, and Location Models. Facility Layout: Introduction, Meaning, Definition and Scope, Factors Influencing Layout, Principles of Layout, Types of Layout, Revision of Layout, Layout Planning, Layout Tools and Techniques, Criteria for Selection and Design of Layouts	12
III	Production Design, Development, Planning and Control: Production Design - Definition, Importance, Factors affecting Product Design. Product Policy - Standardization, Simplification, Diversification, Product Development - Meaning, Importance, Factors responsible for Development, Techniques of Product Development. Production Planning - Meaning, Objectives, Scope, Importance and Procedure of Production Planning, Routing and Scheduling, Dispatch, Follow up, Production Control - Meaning, Objectives, and Factors affecting Production Control.	10
IV	Scheduling and Work Study: Scheduling- Introduction, Operation Planning and Scheduling, Scheduling Techniques for Job Shop, and Scheduling Methodology, Sequencing Problems, Processing N Jobs through two Machines, Processing N Jobs through three Machines. Work Study - Introduction, Definition, Objectives, Benefits, Relationship of Time and Motion Study, Work Study Procedure, Method Study; Work Measurement - Introduction, Definition, Objectives, Benefits of Work Measurement and Techniques of Work Measurement.	10
V	Purchase and Stores Management: Introduction, Vendor Relations, Selection of Vendor, Vendor Rating, Vendor Development; Material Handling - Meaning, Importance, Principles of Material Handling and Costs; and Material Requirement Planning.	10
VI	Quality Management: Meaning, Dimensions of Quality, Cost of Quality, Measuring and Reporting, Quality Cost, Effects of Quality Management on Productivity; Total Quality Management and Business Partners, Customers, Information Technology, Role of Employees in the improvement of Quality, Quality Circle, Six Sigma, and ISO 9000 Standards Certification	14

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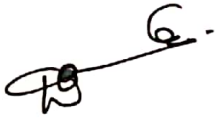
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Statements of Course Outcomes (COs)

By the end of the course, the student will be able to

HC403.1	Understand and basics of production and operations management.
HC403.2	To analyze industry location and plant layout.
HC403.3	Understand Use and Evaluate product development.
HC403.4	To analyze the Scheduling and Work Study.
HC403.5	Understand Use and Evaluate Purchase and Stores Management.
HC403.6	To understand use and evaluate Quality Management.



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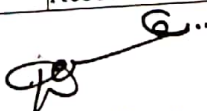
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III SEM – M.Com

Subject – Marginal Costing for Managerial Decisions

Syllabus

UN IT	Content	Hours Allotted
I	Marginal Costing – Introduction; Marginal Costing – Meaning and Definitions; Marginal Cost; Marginal Cost and Marginal Costing – Synonymous Terminologies; Ascertainment of Marginal Cost – (1) Classification of Total Cost – Behaviour-wise Classification of Total Cost; Methods of Segregation; Accounting Treatment of Variable and Fixed Costs; Contribution; Types of Fixed Costs; and Profit-Volume Ratio.	8
II	Break-even Analysis: Introduction; Approaches to Break-Even Analysis (BEA): Algebraic Approach to Mono-Product BEA - Break-even Point and Cash BEP, and Required Sales to earn Target Profit; Tabular Approach to Mono-Product BEA; Graphical Approaches to Mono-Product BEA - Break-Even Charts - Angle of Incidence and Margin of Safety; Profit-Volume Graph of Mono-Product Concerns.	12
III	Multi-Product BEA: Algebraic Approach to Multi-Product BEA; Graphical Approaches to Multi-Product BEA - Multi-Product Break-Even Chart, Weighted Average Approach to Multi-Product Break-Even Chart, and Profit-Volume Graph; and Assumptions underlying Break-Even Analysis.	10
IV	Cost-Volume-Profit Analysis (CVP Analysis): Introduction; BEA Vs CVP Analysis; Effects of changes in Fixed Costs, Unit Variable Cost, Selling Price, and Sales Quantity; Operating Leverage - Cost Structure, Sales and Operating Profit.	10
V	Absorption Costing, Variable Costing and Throughput Costing: Introduction; Approaches for the determination of Profit - Economic and Accounting Approaches; Preparation of Income Statement under Absorption Costing, Variable Costing and under Throughput Costing - Product and Period Costs, Accounting treatment of Product and Period Costs, and Fixed Manufacturing Overheads, Valuation of Unsold Stock, Fixed Production Overhead Absorption Rate, Under- and Over-Absorption of Production Overheads, Method of Costing Sales; Reported Profit under specific circumstances; Reconciliation of Profit under Variable Costing with Profit under Absorption Costing and Under Throughput Costing; and Relevance of Variable Costing for External Reporting.	10
VI	Cost Analysis for Managerial Decisions: Introduction; Managerial Decisions - Influencing Factors and Relevant Information; Application of Marginal Costing for Managerial Decisions - Product Diversification, Make or Buy Decisions, Pricing Decisions, Joint and By-product Costing – Methods of apportioning Joint Costs and Sell or Further Process Decisions, Profitability and Scarce Resource Allocation, Temporary Shut-down, and Optimal Level of Activity	14



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Statements of Course Outcomes (COs)

By the end of the course, the student will be able to

SC301A.1	Understand and Marginal costing, types of cost, variable cost, fixed cost.
SC301A.2	To analyze break even analysis for mono product.
SC301A.3	Understand Use and Evaluate multi product break even analysis.
SC301A.4	To analyze the cost volume profit analysis.
SC301A.5	Understand Use and Evaluate Absorption Costing, Variable Costing and Throughput Costing: Introduction.
SC301A.6	To understand use and evaluate Cost Analysis for Managerial Decisions.

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VI SEM – B.Com

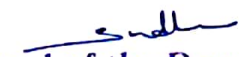
Subject - Quantitative Techniques-II Syllabus

UNIT	Content	Hours Allotted
I	Theory of Games (10 hours): Two-person zero-sum Game, Properties of a Competitive Game, Value of the Game, Finding Optimal Strategy by Maximum-Minimum Principle, Principle of Dominance and When Mixed Strategy is Given (Games without Saddle Point (2×2) Matrix only - Formula Method).	10
II	Assignment Problems (12 hours): Hungarian Method, Types of Solving Assignment, Problems when equal number of Rows and Columns are given by Minimization and Maximization Methods; When Unbalanced Assignment Problem is given, Restrictions on Assignment (when missing values are given); and Salesmen Problems.	12
III	Transportation Problems (14 hours): Find IBFS by North West Corner Method, Least Cost Method and Vogel's Approximation Method; Test for Optimality by Stepping Stone Method, and IBFS in Unbalanced Transportation Problems.	14
IV	Decision Theory and Analysis (12 hours): Decision Making under Uncertainty, Decision Tree Analysis – Advantages, and Simple Problems.	12
V	Simulation (10 hours): Definition, Reasons, Methodology Point-wise, Advantages, Drawbacks, Applications, Stochastic Simulation, Simulation of Inventory Problems, Simulation of Queuing Problems, and Capital Budgeting.	10
VI	Project Management (6 hours): Introduction, Network Analysis, Methodology of PERT/CPM Networks (point-wise), Basic Concepts of Network Analysis, Applications of Network Models, Time Estimation in Vertical Path Analysis, distinction between PERT And CPM, Simple Problems, Network Diagram, Finding Critical Path and Time Estimation.	6

Statements of Course Outcomes (COs)

By the end of the course, the student will be able to

607G2.1	To select the optimal strategy of game.
607G2.2	To explain about the optimum assignment to minimize cost and maximize the profit.
607G2.3	Helps to identify loops in transportation to minimize the transportation cost.
607G2.4	It helps the students to take a part in decision making under risk and uncertainty.
607G2.5	To assess the simulation of inventory problem, queuing system.
607G2.6	To know about the construction of network diagram and to estimate the critical path.


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VI SEM - BBA

Subject – Management Accounting

Syllabus

UNIT	Content	Hours Allotted
I	Meaning, Definition of Management Accounting, Nature of management accounting, Functions of management accounting, Uses and limitation of management accounting, Difference between Management accounting and Financial Accounting, Difference between Management Accounting and Cost Accounting.	10
II	Meaning and types of financial statement analysis, Technique of financial statement analysis, Common size analysis, Comparative analysis, Trend analysis.	10
III	Meaning of ratio analysis, Significance and limitation, Liquid ratios, Turnover ratios, Profitability ratios.	16
IV	Meaning of funds, fund flow statement and cash flow statement, Managerial uses and limitations of fund flow statement, Preparation of fund flow statement, Cash flow statement – meaning, uses and limitations, Fund flow vs cash flow statements.	16
V	Meaning of budget, Budgeting and budgetary control, Significance and limitation and classification of budgets, Flexible budget, Sales budgets.	12

Statements of Course Outcomes (COs)

By the end of the course, the student will be able to

BM601.1	Identify, Describe and Apply management accounting and its objectives in facilitating decision making.
BM601.2	Understand, Apply, analyze and prepare different types of financial activity based management tools and techniques to the preparation and presentation of financial performance.
BM601.3	Understand and analyze various accounting ratios, reports and relevant data.
BM601.4	Prepare Funds Flow statements this helps in planning for intermediate and long-term finances.
BM601.5	Prepare a master budget and demonstrate an understanding of the relationship between the components.


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V SEM – BBA

Subject – Business Research Methods Syllabus

UNIT	Content	Hours Allotted
I	Introduction to Research- Meaning- Objectives- Types of research – Scope of research- research Approaches- Research Process, Research Design, Research methods Vs Research Methodology – Steps in Research – Problems formulation – Statement of Research Exploratory – descriptive- Experimental Research	16
II	Methods of data Collection- Observational and survey methods- Field work plan – Administration of surveys- Training field investigations – Sampling methods- Sample size.	16
III	Tools for Collection of data- Questionnaire design- Attitude measurement techniques – Motivational Research Techniques – Selection of Appropriate – Statistical techniques	14
IV	Statistical Methods- Tabulation of data- Analysis of data – Drawing testing of Hypothesis (Theory Only)- Advanced techniques – ANOVA – Discriminate Analysis – Factor analysis, Conjoint analysis – Multidimensional Scaling – Cluster Analysis (Concepts only)	10
V	Report Writing – Types of reports, Business, Technical and academic report writing – Methodology procedure – Contents – Bibliography.	08

Statements of Course Outcomes (COs)

By the end of the course, the student will be able to

BM505.1	Develop understanding on various kinds of research, objectives of doing research, research process, research designs and sampling.
BM505.2	Identify various sources of information for literature review and data collection.
BM505.3	Have adequate knowledge on measurement & scaling techniques as well as the quantitative data analysis
BM505.4	Have a basic awareness of data analysis, including descriptive & inferential measures.
BM505.5	Write & develop independent thinking for critically analyzing research reports.


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V SEM – B.Com

Subject – Techniques for Business Decisions - I



UNIT	Content	Hours Allotted
I	Introduction to Statistics - Meaning, Definitions, Functions, Scope and Limitations of Statistics and Distrust of Statistics.	10
II	Data and its Collection - Types of Data – Primary and Secondary Data – Methods for Collection of Primary Data – Sources of Secondary Data – Classification – Meaning and Types; Tabulation – Meaning, Rules for Construction of Tables, Parts of Statistical Table and Problems on Tabulation.	12
III	Diagrammatic and Graphic Representation of Statistical Data - Meaning, Types of Diagrams, Simple, Multiple, Subdivided and Percentage, Histogram – Location of Mode through Histogram and Frequency Polygon; and Ogive Curves – Location of Median and Quartiles through Ogive Curves.	14
IV	Measures of Central Tendency - Meaning and Definition, Types of Averages – Arithmetic Mean (Simple and Weighted), Median, Mode (excluding missing Frequency problems).	16
V	Measures of Dispersion - Meaning, Absolute and Relative Measures of Dispersion, Types of Dispersion – Range, Quartile Deviation, Standard Deviation, and Co-Efficient of each Method.	6
VI	Skewness (6 hours): Meaning, Types of Skewness, Measures of Skewness, Absolute and Relative Measures of Skewness, Karl Pearson's Coefficient of Skewness and Bowley's Coefficient of Skewness	6

Statements of Course Outcomes (COs)

By the end of the course, the student will be able to

503.1	To define the importance of Statistics
503.2	To classify the methods for collecting data
503.3	To identify the statistical tools needed to solve various problems.
503.4	To analyze statistical data using measures of central tendency
503.5	To explain the different measures of dispersion
503.6	To test the skewness using various methods


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Department of Computer Science

BCA 63 UNIX Operating System

COURSE: BCA

SEMESTER: VI

Number of teaching hours – 48

Unit	Content	Hours Allotted
I	Introduction: The Unix operating system, , A brief Session, The Unix Architecture, Features of UNIX,POSIX and Single UNIX specification, Locating commands, Internal and External commands, Command Structure, Flexibility of command Usage, Man Browsing the Manual Pages ON-line, Understanding the man Documentation. General-Purpose Utilities: cal command, date command, echo, printf, bc, script, passwd, who, uname.	8 hrs
II	The File System: The file, The Parent –Child Relationship, The HOME Variable, pwd, cd, mkdir, rmdir, Absolute Pathname, Relative Pathname, ls, The Unix File system. Handling Ordinary Files:cat, cp, rm, mv, more, The lp subsystem: Printing a File, File, wc, od, cmp, comm, diff, dos2unix and unix2dos, compressing and archiving files, gzip, and gunzip, tar, zip and unzip. Basic File Attributes: Listing file attributes, listing directory attributes, File Ownership, File Permissions, changing file permissions, Directory Permissions, Changing File Ownership.	10 hrs
III	The Vi Editor: Vi basics, Input Mode, Saving Text and Quitting, Navigation, Editing Text, Undoing Last Editing Instructions(U and U), Repeating the last command(.), Searching for a Pattern(/ and ?), Substitution.	10 hrs
IV	The process: Process basics, process status, system process, Mechanism of process creations, Internal and external commands, process states and zombies, running jobs in background, nice, killing process with signals, job control, at and batch, cron, timing process. Simple filters: The sample database, pr, head, tail, cut, paste, sort, uniq, tr, displaying a word count list. Filters using regular expressions: grep, basic regular expressions, extended regular expressions.	10 hrs
V	The Shell: The shell's Interpretive Cycle, Shell Offering, Pattern Matching, Escaping and Quoting, Redirection, /dev/null and /dev/tty, Pipes, tee, Command Substitution, Shell variables. Essential shell programming: Shell scripts, read, using command line arguments, exit and exit status of command, the logical operators && and - conditional execution, the if conditional, using test and to evaluate expressions, the case conditional, expr, \$0: calling a script by different names, while, for, set and shift, the here document (<<), trap, debugging shell scripts with set -x, sample validation and data entry scripts.	10 hrs

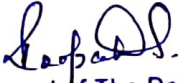
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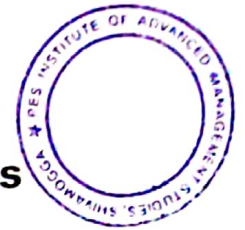
Statements of Course Outcomes (COs)

By the end of the course, the student will be able to

BCA 63.1	To <i>customize</i> a UNIX login account using environment variables, configuration files and startup scripts.
BCA 63.2	To <i>maintain</i> UNIX directories and files, manage UNIX jobs and processes, use of UNIX pipes and file redirection, manipulate data with proper use of Unix filters, role of an operating system and UNIX philosophy.
BCA 63.3	To <i>operate</i> in both graphical and text-based environments; automate a sequence of operations by writing a shell script.
BCA 63.4	To <i>apply</i> UNIX security tools to ensure UNIX directories and files are protected from unauthorized users.
BCA 63.5	To <i>relate</i> the use of on-line documentation, research and experimentation in order to discover how new UNIX commands function.


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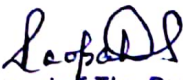
BCA 51 ADVANCED PROGRAMMING IN JAVA


COURSE: BCA51

SEMESTER: V

Number of teaching hours – 48

UNIT	CONTENT	Hours Allotted
I	Review of Java Concepts and AWT, Graphics Programming: Review of Java Concepts .AWT and AWT Classes, Window fundamentals – Component, Container, Panel, Window, Frame, Canvas. Working with frame window. Graphics Programming: Graphics class, methods, drawing objects, line graphs, polygon classes, working with colors and fonts. Advanced graphics operations using Java2D. Designing simple User Interfaces (UIs) using AWT, Layout Manages.	10 hrs
II	Swing, Event Handling and Event Handling: Event Handling: Basics of Event Handling, the delegation event model, AWT event hierarchy and event classes, Event Listener Interfaces, Adapter Classes, Event queue. Swing: Meaning, need difference between AWT and swing. The Model-View-Controller (MVC) design patterns, Creating simple UIs using swing, and handling basic events.	10 hrs
III	Java Beans, Java Archives (JAR): Meaning and need of Java Beans, Advantages, Bean writing process, Bean properties. Java Archives (JARs): Meaning, need, the JAR utility, Creating JAR files.	10 hrs
IV	File Management and JDBC: File, creating a file, writing to a file, opening a file, reading from a file, file management, checking existence of a file, deleting a file. JDBC: Meaning, need, concept and structure of JDBC, relation with ODBC, JDBC driver types and their meaning, the JDBC process – loading the driver, connecting to the DBMS, creating and executing SQL statement, Connection object, Statement object, Prepared Statement object, Callable Statement, Result Set, JDBC Exceptions.	10 hrs
V	Fundamental concepts of Collections, Generics and Network programming: Collections: Meaning, need, Collection interfaces, Concrete Collections – Array List, Hash set, Map. Generics: Meaning, need, benefits, generics usage, basics of generic types, type parameter naming conventions, type wildcards, using type wildcards, generic methods, bound types, writing simple generic container, implementing the container, implementing the constructors, implementing generic methods. Network programming: Meaning of Client, Server, Socket, port. Creating a client socket, creating a server socket, writing simple server and client.	08 hrs

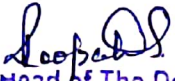

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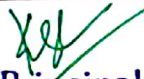

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Statements of Course Outcomes (COs)

By the end of the course, the student will be able to

BCA51.1	Learn the Internet Programming, using Java Applets
BCA51.2	Create a full set of UI widgets and other components, including windows, menus, buttons, checkboxes, text fields, scrollbars and scrolling lists, using Abstract Windowing Toolkit (AWT) & Swings
BCA51.3	Apply event handling on AWT and Swing components.
BCA51.4	Learn to access database through Java programs, using Java Data Base Connectivity (JDBC)
BCA51.5	Learn to design a simple Client and Server components. Pass simple text (static) from client to the server and a receipt acknowledgement (static) back to the client.


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