

**MANGALORE UNIVERSITY**



**MANGALAGANGOTRI**

## **Syllabus**

### **Bachelor of Commerce**

#### **BCOM(Computer Applications)**

**As per the resolutions of BOS in Commerce from the  
Academic Year 2024-25**

**Department of Studies in Commerce**

**(Faculty of Commerce)**

**Mangalore University**

**Mangalagangotri**

# **Bachelor of Commerce(Vocational)Computer Applications**

## **Programme Outcomes (PO) of BCom(vocational)Computer Applications Degree Programme**

The Bachelor of Commerce(BCom) programme has the core objective of preparing employable and resourceful graduates. With this positive outlook, the **programme outcomes** of BCom would be as follows:

- a. To provide students with the knowledge, skills, attitudes and values that will help them take decisions for their lives.
- b. Hands on tools to help them in the world of business and commerce with in depth awareness of the contents of different courses under the Programme.
- c. Holistic development of the personality to understand and actively participate in the well-being of the society.
- d. Work collaboratively and productively in teams. Critically evaluate new ideas, research findings, methodologies and theoretical framework in their chosen elective field.
- e. Courses like Financial Accounting, Quantitative Techniques, and Foundation of Commerce will build the basics of the field and help a student choose electives in the 3<sup>rd</sup> & 4<sup>th</sup> Semester. Corporate Accounting course will help a student build confidence in the accounting knowledge of the corporate world, Business and Corporate Law will strengthen the legal aspects of the business, Financial Management, Direct Tax, Cost & Management Accounting & GST will help in all round growth of a learner about the working of any business.

### **Programme Objectives of BCom Degree**

- a. To create Employable and resourceful Graduates ready to seek either fruitful employment or build in confidence to pursue entrepreneurship.
- b. Demonstrate leadership skills in all walks of life, be it personal or professional.
- c. Become academically brilliant and inculcate research skills to add to the existing stock of knowledge in the public domain.
- d. Create an unfulfilling urge to become enriching global citizens and
- e. Overall a constructive citizen of our country.

### **Scheme of Teaching and Evaluation for BCom (Vocational) Computer Applications Programme**

<b>Semester I</b>								
<b>Sl. No.</b>	<b>Course Code</b>	<b>Title of the Course</b>	<b>Category of Courses</b>	<b>Teaching Hours per Week</b>	<b>SEE</b>	<b>IA</b>	<b>Total Marks</b>	<b>Credits</b>
1		Language–I	Lang	4	80	20	100	3
2		Language–II	Lang	4	80	20	100	3
3	BCom-CAT- 1.1	Quantitative Techniques-I	Core	5	80	20	100	5
4	BCom-CAT- 1.2	Financial Accounting I	Core	5	80	20	100	5
5	BCom-CAT- 1.3	Information Technology	Core	4	80	20	100	3
6	BCom-CAP-1.4	IT and C Lab	Practical	4	40	10	50	2
7	BCom-CAT-1.5	Problem Solving with C	Optional	4	80	20	100	3
8		Constitutional values	Compulsory	3	40	10	50	2
<b>Sub–Total</b>				<b>33</b>				<b>26</b>

Semester II								
Sl. No.	Course Code	Title of the Course	Category of Courses	Teaching Hours per Week	SEE	IA	Total Marks	Credits
1		Language–I	Lang	4	80	20	100	3
2		Language–II	Lang	4	80	20	100	3
3	BCom-CAT- 2.1	Financial Accounting-II	Core	5	80	20	100	5
4	BCom-CAT- 2.2	Desktop Publishing	Core	4	80	20	100	3
5	BCom-CAT- 2.3	Database Management System	Core	4	80	20	100	3
6	BCom-CAP- 2.4	DTP Lab	Practical	4	40	10	50	2
7	BCom-CAP-2.5	DBMS Lab	Practical	4	40	10	50	2
	BCom-CAT- 2.6	Quantitative Techniques-II / Fundamentals of Organisational Behaviour	Optional	4	80	20	100	3
8		Environmental studies	Compulsory	3	40	10	50	2
Sub–Total				36				26

## Semester II

**Course Code B.Com. – CAT -2.1**

**Financial Accounting - II**

**5 Hours per week**

**60 Hours**

### **COURSE OUTCOMES:**

After completing the course, the student will be able to

1. Learn about Accounting Standards and Indian Accounting standards.
2. Understand the recent developments in the field of financial accounting.
3. Learn to deal with special transactions and situations while preparing financial statements.

### **COURSE CONTENTS:**

<b>Module</b>	<b>Particulars</b>	<b>No of Hrs</b>
<b>Module 1</b>	<b>Accounting Standards and Recent Developments in Accounting:</b> Accounting Standards - Meaning, Procedure to issue – Applicability Indian Accounting Standards – Meaning – Applicability Recent Trends in Accounting –Computerised Accounting - Big data Analytics, Cloud Computing in Accounting, Accounting with drones.	<b>12</b>
<b>Module 2</b>	<b>Conversion of Single Entry into Double Entry System:</b> Introduction – Meaning – Limitation of Single-Entry System – Differences between Single Entry & Double Entry System Problems on Conversion of Single Entry into Double Entry (preparing Opening Statement of Affairs, Cash Book, Total Debtors Account, Total Creditors Account, Trading & Profit & Loss Account and Balance Sheet).	<b>12</b>
<b>Module 3</b>	<b>Hire Purchase Accounting:</b> Introduction, Meaning of Hire Purchase, Features Terms used – Hire Purchaser, Hire Vendor, Cash Price, Hire Purchase Price, Total Interest, Down Payment & Net Cash Price Accounting for Hire Purchase transactions in the books of Hire	<b>12</b>

	Purchaser (when Cash Price and Rate of Interest is given) under Accrual System only. Repossession – Complete & Partial	
<b>Module 4</b>	<b>Departmental Accounts:</b> Meaning, Types of Departments, Advantages, Basis of Allocation of common expenses and income among various departments Departmental Accounts – Columnar Trading & Profit & Loss Account, General Profit & Loss Account and Consolidated Balance Sheet Treatment of Inter Departmental Transfers at Cost and Selling Price.	<b>12</b>
<b>Module 5</b>	<b>Royalty Accounts:</b> Meaning – Types of Royalty. Terminologies – Lessor, Lessor, Minimum Rent, Short working – Recoupment of Short working. Accounting Treatment in the books of Lessee with opening Minimum Rent Account.	<b>12</b>

#### **Skill Development:**

1. Collect a copy of Hire Purchase agreement and examine the various terminologies.
2. Identify a business where royalty accounting is applied.
3. Learn to prepare financial statement with incomplete records using imaginary figure.
4. Know the differences between Accounting Standards and Indian Accounting Standards.

#### **Books for Reference:**

1. ICAI Study Materials on Principles & Practice of Accounting, Accounting and Advanced Accounting.
2. SP Iyengar, Advanced Accounting, Sultan Chand & Sons, Vol. 1
3. Advanced Accounting Shukla M.C., Grewal T.S., S Chand, Vol. 1
4. Advanced Accounting, Gupta R.L., Sultan Chand & Sons, Vol. 1
5. Advanced Accounting Jain & Narang, Kalyani Publishers, Vol. 1
6. S.N. Maheshwari, and. S. K. Maheshwari. Financial Accounting. Vikas Publishing House, New Delhi.
7. B.S. Raman, Financial Accounting Vol. I & II, United Publishers & Distributors.

**Note: Latest edition of text books may be used.**

Program Name	<b>B.Com (Computer Applications)</b>	Semester	<b>II</b>
Course Title	<b>Desktop Publishing (Theory)</b>		
Course Code:	<b>BCom-CAT- 2.2</b>	No. of Credits	<b>03</b>
Contact hours	<b>4 Hours per week</b>	Duration of SEA/Exam	<b>3 hours</b>
Formative Assessment Marks	<b>20</b>	Summative Assessment Marks	<b>80</b>

### Course Outcomes (COs):

On successful completion of the course, the Students will be able to:

- Gain basic understanding of the field of desktop publishing
- Acquire skills of preparing projects for publication which include layout and design
- Learn both the technical and aesthetic aspects of text, image manipulation and integration
- Learn using design as a means of communication, along with using tools to implement effective design strategies

Unit	Description	Hours
<b>1</b>	<p><b>Fundamentals of DTP:</b> The possibilities of DTP, choosing the printing house, choosing the paper quality, Choosing the right colors.</p> <p><b>Choosing Fonts:</b> Font styles, parts of letter, Serif Fonts, Sans Serif Fonts, Ornamental Fonts, Fonts used for Paragraphs or General Text, Dingbats, Font size</p> <p><b>Hardware Requirements for DTP:</b> Scanner, Monitor Resolution, memory Requirements, Printers</p> <p><b>Beginning Design:</b> Beginning Steps</p> <p><b>General Design Considerations:</b> Relevance, Proportion, Orientation Placing, Consistency, Contrast, Restraint, Attention to Details, The Total picture</p> <p><b>Text Organization:</b> Headlines, Kickers, Subheads, Captions, Headers and footers, Pull Quotes, Bullet Lists, Nameplates and Logos</p> <p><b>Design Common Media Publications:</b> Newsletters, Letter heads, small Advertisements, Long Advertisements, Visiting cards, Brochures, Catalogues, Redesigning</p> <p><b>Working with images:</b> Comparing Bitmaps and Vector Images, understanding Image resolution, understanding pixel Logic</p>	<b>13</b>
	<p><b>Introduction to Corel DRAW graphics suit x4:</b> Getting started with Coreldraw X4, Exploring the workspace of Coreldraw X4, drawing basic geometric figures, saving the drawing, opening an existing document, previewing with the drawing, working with page layout, closing the drawing and quitting Coreldraw.</p> <p><b>Working with lines:</b> About lines in Coreldraw: Drawing a curve, drawing</p>	

2	<p>calligraphic lines, About outline tool: defining lines and outlines setting, creating a calligraphic outline, adding an arrowhead</p> <p><b>Working with objects:</b> Selecting and deselecting objects, deleting objects, sizing objects, rotating objects, combining objects, grouping in Coreldraw: grouping object, ungrouping objects.</p> <p>Selecting color for an object, filling objects.</p> <p><b>Working with text:</b> Types of text: preparing a layout for using the text, creating artistic text, creating paragraph text, converting text from one type to another, changing the appearances of text, changing a font, changing the font size and color of the text, changing the alignment, applying effects to the text, wrapping paragraph text around objects, fitting text to an object using curve command.</p> <p><b>Working with bitmaps:</b> Importing a bitmap into a drawing, cropping, resampling and resizing a bitmap.</p>	13
3	<p><b>Getting Familiar with Photoshop CS4:</b> Introducing and launching Photoshop CS4, Exploring the new interface.</p> <p>Move tool, eyedropper tool, zoom tool, type tool.</p> <p>The layer palette, the channels palette, the color palette, the history palette, the brush palette, clone source palette, the actions palette. Opening an existing file or Photoshop document, creating a new document, saving files, reverting files, closing files.</p> <p><b>Working with images and selections:</b> Changing the resolution of an image, changing the size of a document.</p> <p>Editing images: rotating an image, cropping an image, trim command.</p> <p><b>Working with selections tool:</b> Marquee tool, working with selections.</p> <p>Lasso tools (3 types of tools only meaning)</p> <p>Magic wand tool (only meaning exclude different options)</p> <p><b>Drawing painting and retouching tools:</b> Setting the current foreground and background colors, Exploring color picker dialog box (only meaning exclude different components), using eyedropper tool.</p> <p>Using retouching tool, healing brush tool, patch tool, clone stamp tool, eraser tool, background eraser tool, magic eraser tool.</p> <p><b>Master layers in Photoshop:</b> Working with layers, creating a new layer, hiding and showing layers, deleting layers, Applying blend modes.</p>	13
4	<p><b>Getting Started with Flash Professional CS6:</b> Starting Flash Professional CS6, Creating new flash File, Exploring the Flash Professional Cs6 workshop (The application Bar, Stage, panels, using tool panels, properties inspector). Transform Panel, swatches panel, color panel, scene panel.</p> <p>Understanding Timeline and layers, Motion Editor, Creating or choosing a new workspace, Saving Flash Files.</p> <p><b>Working with Graphics:</b> Bitmap and vector graphics, Merge Drawing mode, Object drawing mode, Primitive drawing mode, Creating graphics in flash professional CS6, Selecting Objects (Using selection tool, Sub selection tool, lasso tool, selection using lasso tool, Lasso tool with polygon modifier, line tool), Drawing rectangles and ovals, Rectangles and shapes, ovals and circles, polygon and stars, pencil tool, pen tool.</p> <p>Draw straight line with the pen tool, creating a curved path using pen tool, Adding anchor points on paths, deleting corner and curve points, painting with</p>	13



	<p>the brush tool, spray brush tool, Drawing patterns with the deco tool. Paint bucket tool, In bottle tool, eyedropper tool, using eraser tool, Transforming objects, Distorting objects, rotating and skewing objects. Using gradient and bitmap fills (All)</p> <p><b>Working with symbols and instances:</b> Using symbols, creating symbols, duplicate symbols, create instances, editing instance properties, break apart a symbol instance, editing symbols</p> <p><b>Timeline with timeline:</b> Working with timeline, about layer, create a layer, rename layer, outline layer, viewing layer, guide layer. Creating animation, types of animation, Classification of animation in the timeline. Understanding motion tweens, Easing tween animation, orienting objects to the path, swapping targets, motion presets</p>	
<p><b>Text Books:</b></p> <ol style="list-style-type: none"> <li>1. Comdex 9-in-1 DTP Course Kit by Vikas Gupta, Dreamtech Press Publications</li> <li>2. Adobe Flash Professional CS6 Training Guide by Prof. Satish Jain, BPB Publications, First Edition</li> </ol> <p><b>Reference Books:</b></p> <ol style="list-style-type: none"> <li>1. Design Elements, Colour Fundamentals: A Graphic Style Manual for Understanding How Colour Impacts Design. AarisSherin</li> <li>2. Design Media – Techniques for watercolour, pen and ink, pastel and coloured markers. R. Kasprin</li> </ol>		
<p><b>Pedagogy:</b> Lecture/ PPT/ Videos/ Animations/ Role Plays/ Think-Pair-Share/ Predict-Observe-Explain/ Demonstration/ Concept mapping/ Case Studies examples/ Tutorial/ Activity/ Flipped Classroom/ Jigsaw/ Field based Learning/ Project Based Learning/ Mini Projects/ Hobby Projects/ Forum Theatre/ Dance/ Problem Based Learning/ Game Based Learning/ Group Discussion/ Collaborative Learning/ Experiential Learning / Self Directed Learning etc.</p>		

Program Name	<b>B.Com (Computer Applications)</b>	Semester	<b>II</b>
Course Title	<b>Database Management System (Theory)</b>		
Course Code:	<b>BCom-CAT- 2.3</b>	No.of Credits	<b>03</b>
Contact hours	<b>4 Hours per week</b>	Duration of SEA/Exam	<b>3 hours</b>
Formative Assessment Marks	<b>20</b>	Summative Assessment Marks	<b>80</b>
<b>Course Outcomes (COs):</b>  At the end of the course, students will be able to: <ul style="list-style-type: none"> <li>● Explain the various database concepts and the need for database systems.</li> <li>● Identify and define database objects, enforce integrity constraints on a database</li> <li>● Identify entities and relationships and draw ER diagram for a given real-world problem.</li> <li>● Convert an ER diagram to a database schema and its representation in Relational model.</li> <li>● Formulate queries in Relational Algebra and implement using Structured Query Language (SQL)</li> <li>● The importance of transaction processing and concurrency control techniques.</li> </ul>			
<b>Unit</b>	<b>Description</b>		<b>Hours</b>
<b>1</b>	<b>Database Architecture:</b> Introduction to Database system applications. Characteristics and Purpose of database approach. Data models. Database schema. Database architecture. Data independence. Database languages, interfaces, and classification of DBMS.  <b>E-R Model:</b> Entity-Relationship modeling: E-R Model Concepts: Entity, Entity types, Entity sets, Attributes, Types of attributes, key attribute, and domain of an attribute. Relationships between the entities. Relationship types, roles and structural constraints, degree and cardinality ratio of a relationship. Weak entity types, E -R diagram.		<b>13</b>
<b>2</b>	<b>Relational Data Model:</b> Relational model concepts. Characteristics of relations. Relational model constraints: Domain constraints, key constraints, primary & foreign key constraints, integrity constraints and null values.  <b>Basics of SQL:</b> Table fundamentals, Data types, CREATE TABLE command, Inserting data into table, Viewing Data in the table, sorting data in a table, Creating a table from a table, Inserting data into a table from another table, Delete operations, Updating the contents of a table, Modifying the structure of tables, Renaming tables, destroying tables, displaying table structure.		<b>13</b>

3	<p><b>Integrity Constraints:</b> Types of data constraints, IO constraints-The PRIMARY KEY constraint, The FOREIGN KEY constraint, The UNIQUE KEY constraint, Business Rule Constraints- NULL value concepts, NOT NULL constraints, CHECK constraint, DEFAULT VALUE concepts.</p> <p><b>Operations:</b> Arithmetic Operators, Logical Operators, Range Searching, Pattern Matching, Oracle Table – DUAL, Oracle Function- Types, Aggregate Function, Date Conversion Function.</p> <p><b>GROUPING DATA FROM TABLES IN SQL:</b> Group By clause, Having clause, sub-queries, JOINS, Using the UNION, INTERSECTION, MINUS clause.</p> <p>Control Structure - Conditional Control, Iterative Control</p>	13
4	<p><b>Basics of PL/SQL:</b> The Generic PL/SQL Block, Character set, Literals, Data types, Variables, Logical comparisons, Comments</p> <p><b>PL/SQL Transactions:</b> Cursor-Types of Cursor, Cursor Attributes. Explicit cursor- Explicit cursor Management, Cursor for loop</p> <p><b>PL/SQL Database Objects:</b> Procedures and Functions, Oracle Packages, Error Handling in PL/SQL.</p> <p><b>Database triggers:</b> Use of database triggers, Applying database triggers, Syntax of creating triggers.</p> <p><b>Oracle Packages,</b> Components of an oracle package, use of packages, Packages Specification, Creating packages.</p> <p><b>Error handling in PL/SQL:</b> Oracle's Named Exception handlers (only predetermined internal PL/SQL Exceptions)</p>	13
<p><b>Text Books:</b></p> <ol style="list-style-type: none"> <li>1. RamezElmasri and Shamkant B. Navathe, Fundamentals of Database Systems,7<sup>th</sup> Edition, Pearson Education Asia Publication,2016</li> <li>2. Ivan Bay Ross, SQL,PL/SQL the Programming Language of Oracle,4<sup>th</sup> Edition, BPB Publication 2009.</li> </ol> <p><b>Reference Books:</b></p> <ol style="list-style-type: none"> <li>1. Database Systems Concepts, Abraham Silberschatz, Henry Korth, S.Sudarshan, 6<sup>th</sup>Edition, McGraw Hill, 2010.</li> <li>2. Introduction to Database System, C J Date, Pearson, 1999.</li> <li>3. Database Management Systems, Raghu Rama Krishnan and Johannes Gehrke, 3rd Edition, McGraw Hill, 2002</li> </ol>		
<p><b>Pedagogy:</b> Lecture/ PPT/ Videos/ Animations/ Role Plays/ Think-Pair-Share/ Predict-Observe-Explain/ Demonstration/ Concept mapping/ Case Studies examples/ Tutorial/ Activity/ Flipped Classroom/ Jigsaw/ Field based Learning/ Project Based Learning/ Mini Projects/ Hobby Projects/ Forum Theatre/ Dance/ Problem Based Learning/ Game Based Learning/ Group Discussion/</p>		

Collaborative Learning/ Experiential Learning / Self Directed Learning etc.			
Program Name	<b>B.Com (Computer Applications)</b>	Semester	<b>II</b>
Course Title	<b>DTP Lab</b>		
Course Code:	<b>BCom-CAP- 2.4</b>	No.of Credits	<b>02</b>
Contact hours	<b>4 Hours per week</b>	Duration of SEA/Exam	<b>3 hours</b>
Formative Assessment Marks	<b>10</b>	Summative Assessment Marks	<b>40</b>

### **PART-A**

#### **Adobe InDesign**

1. Design College day invitation by using In Design tools.
2. Design a News paper cutting.

#### **Adobe Coreldraw X4**

1. Create any banner in CorelDraw using different tools
2. Create Business card (visiting card) in CorelDraw using different tools.

### **PART-B**

#### **Adobe Photoshop**

1. Create image in Photoshop painting tools or use existing images copy the portions of one image to another image. Use Toolbox options. Marquee Tool (Rectangular Marquee, elliptical Marquee), Move, Lasso Tool, Magic wand and Crop Tools.
2. Create images of artistic architectures using Photoshop painting tools (brush, pencil, color, and paint bucket tools), Drawing tools and retouching tools.
3. Create image or use existing images to create a new layer, delete layer, show and hide layers and apply different blend modes.

#### **Adobe Flash**

1. Create a moving butterfly using simple motion tween animation in Adobe Flash.
2. Using Adobe Flash, design a building in background using different tools and simple motion tween animation for moving the bus

**Evaluation Scheme for Lab Examination:**

<b>Assessment Criteria</b>		
<b>Program-1</b>	<b>PART-A</b> <b>Writing:8Marks Execution:7Marks</b>	<b>15 Marks</b>
<b>Program-2</b>	<b>PART-B</b> <b>Writing:5 Marks Execution:5Marks</b>	<b>20 Marks</b>
<b>Practical Record</b>		<b>05 Marks</b>
<b>Total</b>		<b>40Marks</b>

<b>Program Name</b>	<b>B.Com (Computer applications)</b>	<b>Semester</b>	<b>II</b>
<b>Course Title</b>	<b>DBMS Lab</b>		
<b>Course Code:</b>	<b>BCom-CAP- 2.5</b>	<b>No.of Credits</b>	<b>02</b>
<b>Contact hours</b>	<b>4 Hours per week</b>	<b>Duration of SEA/Exam</b>	<b>3 hours</b>
<b>Formative Assessment Marks</b>	<b>10</b>	<b>Summative Assessment Marks</b>	<b>40</b>

## DBMS

### SQL Queries

1. Create a table EMPLOYEE using SQL command, employee (empno, ename, desg, dept, gender, salary). Specify primary key and NOT NULL constraints and allow 'M' or 'F' for gender.

#### Write the following SQL Queries:

- a) Display all the information about all employees.
  - b) Display empno, ename and desg of all employees.
  - c) Display the details of all female employees.
  - d) List empno, ename and desg of all employees whose salary more than 5000.
  - e) Display the names of employees who gets the maximum salary.
  - f) Display the number of employees working in marketing and sales department.
2. Create table STUDENT using SQL command to store

Column Name	Data Type	Size
rno	Varchar2	6
Name	Char	15
Class	Varchar2	8
Marks1	Number	3
Marks2	Number	3
Marks3	Number	3

#### Write SQL queries for the following:

- a). Display the structure of the table STUDENT.
- b). Add new column TOTAL and update the contents of TOTAL column of STUDENT table.
- c). Display the students details whose TOTAL is between 70 to 90.
- d). Display the names of students whose name ends with 'th'.
- e). Delete all the records of the table STUDENT.

3. Create a table BOOK using SQL command to store

Column_Name	Data Type	Size
BOOKCODE	Varchar2	10
TITLE	Varchar2	20
PUBLISHER	Varchar2	15
CATEGORY	Varchar2	10
YEAR	Number	04
PRICE	Number	8,2

**Write SQL queries for the following:**

- List the details of the books whose publisher's name start with 'M'.
  - List the details of publishers having 'A' as the second character in their names.
  - Find the books published in 2010,2011,2012.
  - Display the BOOKCODE, TITLE, PUBLISHER of all books in the descending order of YEAR.
  - Display the details of all books other than **MICROSOFT PRESS** publishers.
4. Create the following tables by identifying primary and foreign keys. Specify the not null property for mandatory keys.

SUPPLIERS (SUPPLIER\_NO, SNAME, SADDRESS, SCITY)

COMPUTER\_ITEMS (ITEM\_NO, SUPPLIER\_NO, ITEM\_NAME, IQANTITY)

**Write SQL statement for the following:**

- List ITEM and SUPPLIER details.
- List the names of the suppliers who are supplying keyboard.
- Display the items supplied by 'Microtech'.
- List the items supplied by the suppliers 'Cats' and 'Electrotech'.

**PL/SQL**

- Write a PL/SQL program to process a bank transaction whenever a request for withdrawal issued, a check is made if there is sufficient fund in the account. If the fund is not available print the message fund not available.
- Write a PL/SQL program to compute DA, HRA, Tax and net pay of employees which contains the following columns. empno, empname, basicpay , DA ,

HRA,TAX,NET PAY. Given HRA is 10% of basicpay, DA is 12% of basicpay, Tax is 10% of basicpay. Using Open, fetch and close statements.

7. Write a PL/SQL program to find factorial of a given number using function.
8. Write a PL/SQL program to compute the selling price of books depending on the book code. The Book table contains columns: BookNo, Book Code, Author, Title and Price.

The selling price= Price-Discout.

The discount is calculated as follows:

<b>Book Code</b>	<b>Discount percentage</b>
A	10% of Price
B	20% of Price
C	25% of Price

#### **Evaluation Scheme for Lab Examination:**

<b>Assessment Criteria</b>		
<b>Program-1</b>	<b>PART-A</b> <b>Writing:8Marks Execution:7Marks</b>	<b>15 Marks</b>
<b>Program-2</b>	<b>PART-B</b> <b>Writing:5 Marks Execution:5Marks</b>	<b>20 Marks</b>
<b>Practical Record</b>		<b>05 Marks</b>
<b>Total</b>		<b>40Marks</b>



## Course Code B.Com. – CAT -2.6 QUANTITATIVE TECHNIQUES – II

4 Hours per week

48 Hours

### COURSE OUTCOMES:

After completing the course, the student will be able to

1. Establish relationships between variables in real-world situations by using methods like regression and correlation.
2. Use the ideas from probability distributions to solve practical issues.
3. Predict future results using time series
4. Recognise the relationship between two variables and how to use ratios and proportions to express it.

### COURSE CONTENTS:

Module	Particulars	No of hrs
<b>Module 1</b>	<b>Descriptive Analysis of Bivariate Data:</b> Correlation- Meaning and Definition, Linear and Non-linear correlation, Correlation and causation, Scatter Diagram, Karl Pearson's Co-efficient of Correlation, Calculation and Spearman's Rank Correlation.	<b>10</b>
<b>Module 2</b>	<b>Regression Analysis:</b> Regression Analysis- Principle of Least Squares and Regression lines, Regression equations and estimation. Properties of Regression Coefficients.	<b>10</b>
<b>Module 3</b>	<b>Time Series Analysis and Theory of Probability:</b> Meaning and uses of Time Series, Various components of Time series, determination of Trend using Moving Average and Least square method  Theory of Probability: Some important concepts, Addition Theorem of probability for two non-mutually and mutually exclusive events - Multiplication theorem of probability for dependent and independent events. Simple problems	<b>10</b>
	<b>Ratios and Proportions and Theory of Equations:</b>	

<b>Module 4</b>	Definition- Equality of Ratio- Simple Problems. Proportion- definition-Direct Proportion-Inverse Proportion- Continued Proportion- Problems on proportions Equations: Definition - Degree of Equation. Types of Equation - Linear equations and its solution-Simultaneous linear equations- Quadratic equation-Solution by method of factorisation and formula method.	<b>10</b>
<b>Module 5</b>	<b>Permutation and Combinations:</b> Factorial Notations- permutations of n different things-Circular permutations-Permutation of things not all different- Restricted Permutation-Simple problems. Combinations - Simple problems based on formula.	<b>08</b>

#### **Skill Development Activities**

1. Determine the strength and direction of the relationship between advertisement expenditure and sales income by computing the correlation coefficient.
2. Use historical sales data to create a simple linear regression model to predict future sales based on advertisement expenditure.
3. Utilize a time series model to analyze monthly sales data to identify trends and seasonal patterns and generate a forecast for the upcoming year.
4. Instruct the students to use their knowledge of ratios to determine how much of each ingredient they would require to make the recipe for exactly the number of people in the group
5. The task involves resolving a shelf arrangement issue to maximize visibility by utilizing permutations and combinations to explore various arrangements

#### **Books for Reference:**

1. Business Statistics- S.C. Gupta
2. Business Mathematics- D.C. Sancheti & V.K. Kapoor, Sulthan Chand and sons
3. Business Statistics- S.P. Gupta, S.E. Gupta, B.N. Gupta
4. Business Mathematics-Madappa and Sridhara Rao, Shubhash Publications
5. Business Mathematics, S. N Dorairaj, United Publication
6. Financial Mathematics, A Lenin Jyothi, Himalaya Publications, Mumbai
7. Business Mathematics – S.P Gupta
8. Business Mathematics – Dr. Amarnath Dikshit & Dr. Jinendra Kumar Jain, Himalaya Publications
9. Business Mathematics – Kashyap Trivedi, Chirag Trivedi, Pearson Publications
10. Comprehensive Statistical Methods – P.N. Arora, Sumeet Arora & S. Arora, Chand Publications

## Course Code B.Com. – CAT -2.6

### Fundamentals of Organisation Behaviour

4 Hours per week

48 Hours

#### COURSE OUTCOMES:

After completing the course, the student will be able to

1. Create awareness about how organizational behaviour works in an organization and its role and functions.
2. Develop insight with different theories of motivations and strategies to improve motivation in the workplace.
3. Understand group dynamics and demonstrate skills required for working in groups and team building
4. Understand the concepts of Personality and attitude, Perception and motivation,

#### COURSE CONTENTS:

Module	Particulars	No of Hrs
Module 1	<b>Introduction to Organisational Behaviour:</b>  Meaning of Organizations –Importance of organizations-contributing disciplines to the Organizational Behavior- definitions and meaning of Organization Behaviour - Nature and characteristics of Organizational Behaviour- scope/ key elements of organizational behavior- OB Models- Importance of OB- role of managers in OB – Interpersonal, Informational, decisional roles, challenges & opportunities for OB- Limitations of organizational behavior.	12
Module 2	<b>Foundations of Individual Behavior:</b>  Factors affecting Individual Behavior. Personality- Characteristics of Personality- Determinants of personality- Personality traits influencing OB.  <b>Attitudes</b> -Features of Attitude- components of attitude- attitude formation- major types of work-related attitudes.	12

	<b>Job Satisfaction-</b> Ways to Measure Job Satisfaction- Causes & Impacts of job satisfaction.	
<b>Module 3</b>	<p><b>Emotions, Perception and Learning:</b></p> <p><b>Emotions &amp; Moods-</b> Basic Set of Emotions- Sources of Emotions and Moods- Emotional Labor- Emotional Intelligence - Elements of Emotional Intelligence- OB Applications of Emotions and Moods.</p> <p><b>Perception-</b> Factors influencing perception - Perceptual Process- Importance of Perception in OB-Perception and Individual Decision Making- Group Organisational decision-making</p> <p><b>Learning-</b> Nature of learning- Factors affecting learning- components of learning process.</p>	<b>12</b>
<b>Module 4</b>	<p><b>Motivation and Group Dynamics:</b></p> <p><b>Motivation:</b> Concept, importance and theories of motivation. Maslow's Theory of hierarchical needs, Herzberg's two-factor Theory, McClelland's Theory of Needs, Vroom's Theory of Expectancy.</p> <p><b>Group Dynamics:</b> Meaning of groups and group dynamics, Formation, Characteristics and Types of groups, Group cohesiveness - Factors influencing group cohesiveness - Group decision making process.</p>	<b>12</b>

### **Skill Development:**

1. Visit any organization and make a study on factors affecting perception.
2. Collect Bio-data of Motivational theory Proposers.
3. Visit nearby organization and analyse the Role of Managers.
4. Make a survey on measures followed by organization regarding Job Satisfaction
5. Any other activity relevant to the course.

### **Reference Books:**

1. Organisation Behaviour An Evidence Approach – Fred Luthans McGraw Hill
2. Organisation Behaviour – Stephen P. Robbins Timothy A Judge
3. Organisation Behaviour by K. Ashwathappa

4. A Text Book of Organisational Behaviour -With Text and cases -CB Gupta- S Chand New Delhi.
5. Personnel Management (Text and Cases) C B Memoria and V.S.P. Rao- Himalaya Publishing House, New Delhi
6. Strategic Management and Organisation Behaviour \_ Dr. Suman Shetty N, Hyderali, Dr. Ravi M .N., and Umesh Shetty, Professional Books Publishers, Hyderabad.