



फोन : 0771-4053443

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# गुरुकुल महिला महाविद्यालय

उत्तीसगढ़ शासन तथा पंडित रविशंकर शुक्ल विश्वविद्यालय रायपुर से संबंध

गुरुकुल परिसर, कालीबाड़ी रोड, रायपुर (उ.ग.) ई-मेल : info@gurukulraipur.com

संचालित भातखण्डे ललितकला शिक्षा समिति, गांधी चौक, रायपुर (उत्तीसगढ़) पंजीवन क्रं. 16/51-52

## 1.3.2.1: Number of courses that include experiential learning through project work/field work/internship

### YEAR 2022-23

S.No.	Course Name	Page No.
1.	B.Com III	5
2.	B.C.A. III	6
3.	M.Com. IV Sem	30

  
PRINCIPAL,  
Gurukul Mahila Mahavidyalaya  
Kalibadi Road, RAIPUR (C.G.)

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प्रपत्र

विषय/संकाय/प्रश्न-पत्र का नाम— **B.Com.(Computer Application)**

क्रमांक	कक्षा का नाम	वर्तमान पाठ्यक्रम	नवीन संशोधित पाठ्यक्रम	नवीन संशोधित पाठ्यक्रम का औचित्य
1.	1 <sup>st</sup> Year	COMPUTER FUNDAMENTALS AND OFFICE AUTOMATION	COMPUTER FUNDAMENTAL	Updation Required
2.	1 <sup>st</sup> Year	COMPUTERIZED FINANCIAL ACCOUNTING	PC SOFTWARE AND MULTIMEDIA	Updation Required
3.	1 <sup>st</sup> Year	PRACTICAL	PRACTICAL	Updation Required
4.	2 <sup>nd</sup> Year	INTERNET APPLICATION & E-COMMERCE	INTERNET APPLICATION & E-COMMERCE	No Change
5.	2 <sup>nd</sup> Year	RELATIONAL DATABASE MANAGEMENT SYSTEM	RELATIONAL DATABASE MANAGEMENT SYSTEM	No Change
6.	2 <sup>nd</sup> Year	PRACTICAL	PRACTICAL	No Change
7.	3 <sup>rd</sup> Year	PROGRAMMING IN VISUAL BASIC	PROGRAMMING IN VISUAL BASIC	No Change
8.	3 <sup>rd</sup> Year	SYSTEM ANALYSIS, DESING & MIS	SYSTEM ANALYSIS, DESING & MIS	No Change
9.	3 <sup>rd</sup> Year	PRACTICAL	PRACTICAL	No Change

केन्द्रीय अध्ययन मंडल के अध्यक्ष एवं सदस्यों का हस्ताक्षर

S.N.	Name	Designation/University/College	Signature with Date
1.	Dr. Sanjay Kumar	Head, S.o.S. in Computer Science & I.T., Pt. R.S. University, Raipur	<i>Sanjay Kumar</i> 11-06-2018
2.	Mr. Hari Shankar Prasad Tonde	Head, Dept. of Computer Science, Sarguja University, Ambikapur	<i>Hari Shankar Prasad Tonde</i> 11-06-18
3.	Dr. Anuj Kumar Dwivedi	Head, Dept. of Computer Science, Govt. V.B.S.D. Girls College, Jashpur Nagar, Jashpur	<i>Anuj Kumar Dwivedi</i> 11/6/2018
4.	Mr. L.K. Gavel	Head, Dept. of Computer Science, Govt. G.S.G. P.G. College Balod	<i>L.K. Gavel</i> 11/06/18
5.	Dr. J. Durga Prasad Rao	Head, Dept. of Computer Science, Shri Sankracharya Mahavidyalaya, Bhilai	<i>J. Durga Prasad Rao</i> 11/6/18

COMPUTER APPLICATION  
MARKS DISTRIBUTION

Theory Paper	Paper - I	Total Marks - 50
	Paper - II	Total Marks - 50
Every unit of Theory Paper will consists of 10 Marks.		
Practical Paper		Total Marks - 50
Practical Marks Distribution :	Viva -	10
	Internal -	15
	Practical -	25
Practical Test will consist of 3 Hrs.		<u>Total Marks - 150</u>

PAPER - I

PROGRAMMING IN VISUAL BASIC

(Paper Code-1165)

UNIT-I Introduction to Visual Basic, Programs, Variables

Editions of Visual Basic, Event Driven Programming, Terminology, Working environment, project and executable files, Understanding modules, Using the code editor window, Other code navigation features, Code documentation and formatting, environment options, code formatting option automatic code completion features. Introduction to objects, Controlling objects, Properties, methods and events, Working with forms, interacting with the user: MsgBox function, InputBox function, Code statements, Managing forms, Creating a program in Visual Basic, Printing, Overview of variables, User-defined data types, constants working with procedures, Working with dates and times, Using the Format Function, Manipulating text strings.

UNIT-II Controlling Program Execution, Working with Control

Comparison and logical operators, If...Then statements, Select Case Statements looping structures, Using Do...Loop structures, For...Next statement, Exiting a loop. Types of controls, Overview of standard controls, ComboBox and ListBox, OptionButton and Frame controls Menu, Status bars, Toolbars, Advanced standard controls, ActiveX controls, Insertable objects, Arrays, Dynamic Arrays.

UNIT-III Procedure, Function Error Trapping & Debugging

Procedure, Function, call by value, call by reference, Type definition, with object, Validation, Overview of run-time errors, error handling process, The Err object, Errors and calling chain, Errors in an error-handling routine, Inline error handling, Error handling styles, General error-trapping options Type of errors, Break mode Debug toolbar, Watch window, Immediate window, Local window, Tracing Program flow with the Call Stack.

B.Com. -Part-III

*Sumar*  
11-06-2018  
Dr. Sanjay Kumar

*Anuj*  
11/6/18  
(Dr. A.K. Divedi)

*Gaur*  
11/06/18  
(L.K. Gaur)

(22)  
*YMP*  
11-06-18  
Hari Manan Prasad Tangle  
(Dr. Jitendra Kumar)  
*Rao*

**UNIT-IV Sequential and Random Files :**

Saving data to file, basic filling, data analysis and file, the extended text editor, File organization Random access file, The design and coding, File Dialog Box, Picture Box, Image box, Dialog Box, using clipboard, Copy, Cut, Paste of Text & Picture in Clipboard, Use of Grid Control Multiple document interface, Single document interface.

**UNIT-V Data Access Using the ADO Data Control & Report Generation**

Overview of ActiveX data Objects, Visual Basic data access features, Relational database concepts Using the ADO Data control to access data, Overview of DAO, RDO, Data Control, structured query language (SQL), Manipulating data Using Data Form Wizard. Overview of Report, Data Report, Add groups, Data Environment, Connection to database Introduction to Crystal Report Generator.

**BOOK REFERENCE :**

- 1 Visual Basic Programming - Reeta Sahu, B.P.B. Publication.
- 2 Mastering in Visual Basic - By BPB Publications.
- 3 Visual Basic Programming - Mark Brit.

**PAPER - II**

**SYSTEM ANALYSIS, DESIGN & MIS**

(Paper Code-1166)

**UNIT-I Introduction -**

Systems Concepts and the information systems environment : Definition of system, Characteristics of system, elements of system, types of system, The system Development life cycle : consideration of candidates system. The Role of system Analyst : Introduction, the multiphase role of the analyst, the analyst / user interface, the place of the analyst in the MIS Organization.

**UNIT-II System Analysis, Tools of Structured Analysis, Feasibility Study-**

System Planning and initial investigation : Basis for planning in systems analysis, initial investigation, fact finding, fact analysis, determination of feasibility.

Information Gathering : Kind of information, Information gathering tools.

Structured Analysis, Flow chart, DFD, Data Dictionary, Decision Tree, Structured English, Decision Table. System Performance, Feasibility Study. Data Analysis.

**UNIT-III System Design & System Implementation -**

The process of Design Methodologies. Input Design, Output Design, Form Design, File Structure, File organization, data base design, System Testing, the test plan, quality assurance, data processing auditor. Conversion, Post implementation review, Software Maintenance.

B.Com. -Part-III

*Sumit*  
11-06-2018

*Dr. Sanjay Kumar*

*Anuj*  
11/06/18  
(Dr. A.K. Divedi)

*Praveen*  
11/06/18  
(L.K. Gaur)

(23)  
*JMD*  
11-06-18  
Haji Manoj Kumar  
*11/06/18*  
*N. T. D. A. boud*

**UNIT-IV Introduction to MIS & Other Subsystem-**

Evolution of MIS, Need of MIS, Definition & Benefits of MIS, Characteristic, Role component of Information system, data base as a future of MIS, Decision making, logic of Management Information system. Structure of MIS.

**UNIT-V Information System Concept -**

Difference between Transaction Processing. System (TPS) and Management Information System, How MIS works, MIS and Information Resource Management, Quality information Building Blocks for the information system, information system concept, Other system characteristic (Open & Closed System), difference between MIS & Strategic System, Adaptive system, Business function information system.

**BOOK REFERENCE :**

1. System Analysis and Design - Elias M. Awad.
2. System Analysis and Design - Alan Dennis & Barbara Haley Wix.
3. Management Information systems - C.S.V. Murthy, Himalaya Publication House.

**PAPER - III**

**PRACTICAL EXERCISES BASED ON PAPER I & II**

**Practicals to be done -**

1. At least 20 practical - exercises covering the contents of paper - I (e.g. Designing calculator, sorting of elements, Generating Fibonacci series)
2. Design the Project on one of the following - Application Software / Website Design/ Accounting software / Inventory control System / System Software & other (e.g. Library Management System, Medical management, Stock Management, Hotel Management, Website for your institute / Website of any Organization)
3. The Project Report cover the following topic - Objective, Hardware & Software Requirements, Analysis, Design, Coding, input forms, testing, Reports, Future enhancement of s/w.
4. Practical exam is based on the Project Demonstration & report.

B.Com. -Part-III

*Amey*  
11-06-2018  
(Dr. Anuj Kumar)

*Amey*  
11/6/18  
(Dr. A.K. Dairvedi)

*Gaur*  
11/06/18  
(L.K. Gaur)

*Jha*  
11.06.18  
Hari Shankar Prasad Tande  
/ Dr. J. Durga Pr. R.

**SCHEME OF EXAMINATION 2020-2021**  
**BCA PART- III**

Subject Code	Subject Paper	Theory Marks		Internal Marks		Teaching Load per Week		
		Max. (A)	Min. (B)	Max. (C)	Min. (D)	L	T	P
BCA301	Statistical Analysis	80	27	20	8	4	2	-
BCA302	Programming in Java	80	27	20	8	4	2	-
BCA303	Dot Net Technology	80	27	20	8	4	2	-
BCA304	Software Engineering	80	27	20	8	4	2	-
BCA305	Data Structure	80	27	20	8	4	2	-
BCA306	Computer System Architecture	80	27	20	8	4	2	-
BCA307	LAB VII: Programming Lab in Java	100	50	40	16	-	-	3x2
BCA308	LAB VIII: Dot Net Technology Lab	100	50	40	16	-	-	2x2
BCA309	Project	100	50	20	8	-	-	1x2
TOTAL		780	312	220	88			
GRAND TOTAL	(PAPER + INTERNAL)	(A+C) 1000		(B+D) 400				

- Student will have to pass individually in all theory, practical and sessional

**Statistical Analysis**  
**Subject Code - BCA-301**

Max Marks : 80

Min Marks : 27

**Note :** The Question Paper setter is advised to prepare unit-wise question with the provision of internal choice. Only Simple calculators allowed not scientific calculator.

**UNIT-I**

**COMBINATORICS:** Permutation and Combination, Repetition and Constrained Repetition, Binomial Coefficients, Binomial Theorem.

**UNIT-II**

Frequency distributions, Histograms and frequency polygons, Measures of central tendency: Mean, Mode, Median, Dispersion, Mean deviation and standard deviation. Moments, Skewness, kurtosis,

**UNIT-III**

**Elementary probability theory:** Definition, conditional probability, Probability distribution, mathematical expectation

**Theoretical distribution:** Binomial, Poisson and Normal distribution, Relation between the binomial, poisoned Normal distribution.

**UNIT-IV**

**Correlation and Regression:** Linear Correlation, Measure of Correlation, Least Square Regression lines.

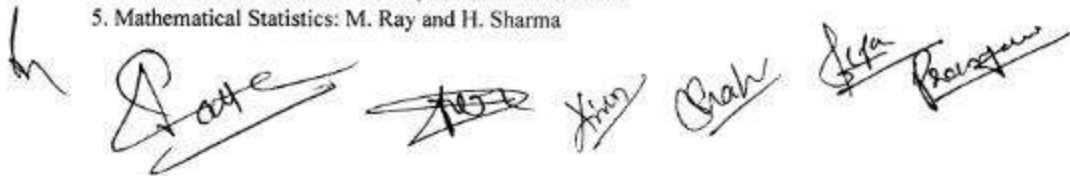
**Curve fitting:** Method of least square, least square line, least squares Parabola. Chi-square test: definition of chi-square; significance test: contingency test, coefficient of contingency.

**UNIT-V**

**Basic of sampling theory:** Sample mean and variance, students t-test, test of Hypotheses and significance, degree of freedom, Z-test, small and large sampling, Introduction to Monte Carlo method.

**TEXT BOOKS:**

1. Advanced Engineering Mathematics: H.K. Dass; S. Chand & Co., 9 Revised Edition, 2001.
2. Discrete Mathematics: S.K. Sarkar; S. Chand & Co., 2000.
3. Numerical Analysis: S.S. Sastry; Prentice Hall of India, 1998.
4. Mathematical Statistics: J.N. Kapoor and H.C. Saxena.
5. Mathematical Statistics: M. Ray and H. Sharma

A series of handwritten signatures in black ink, including names like 'Date', 'Xim', 'Chah', 'Sera', and 'Rajstew', written across the bottom of the page.

**Programming in Java**  
**Subject Code - BCA-302**

Max Marks : 80

Min Marks : 27

**Note :** The Question Paper setter is advised to prepare unit-wise question with the provision of internal choice. Only Simple calculators allowed not scientific calculator.

**UNIT - I**

**Introduction:** Genesis of java, importance to the Internet, overview of features. **OOP :** OOP features, data types, control structures, arrays, methods and classes, nested & inner classes, string and String Buffer class, Wrapper Class, vectors,

**UNIT-II**

**Operators:** Arithmetic Operators, Relational Operators, Logical Operators, Bit wise Operators, Conditional Operators, new operator, [ ] and instance of operator. Control Statements: Java's Selection statement, Iteration Statement, Jump Statement, Array: Declaring Array variables, Constructing an Array, Initializing an Array, Multidimensional Arrays, Anonymous Arrays.

**UNIT - III**

**Introducing Classes:** Class Fundamentals, Declaring Object, Assigning Object Reference Variables, Defining Methods, method overloading, Using objects as parameter, Constructors, Garbage collection, finalize () method. Inheritance: Inheritance basic, method overloading, object reference this and super, Chaining constructor using this () and super (), Member accessibility modifier: public, protected, default accessibility of member, private protected, private.

**UNIT - IV**

**Package:** Define package, CLASSPATH, importing package, **Interface:** Define an interface, implementing interface, extending interface, variable in interface, Overview of nested class: Top level nested class and interface, Non static inner class, Local class.

**Exception Handling :** **Fundamental:** exception types, using try and catch, throwing exceptions, defined exceptions.

**UNIT-V**

**Multithreaded Programming :** Java spread model, creating threads, and thread priorities, synchronization. Suspending resuming and stopping threads. **Input/Output:** Basic Streams, Byte and Character Stream, predefined streams, reading and writing from console and files. Using standard Java Packages (lang.util.io), **JDBC:** Setting the JDBC connectivity with backend database.

**BOOKS RECOMMENDED :**

1. The Complete Reference Java 2
2. A Programmer Guide to Java
3. Web Enabled Commercial Application Java 2
4. Java Primer
5. Java Programming

- Herbert Schildt, Publisher- TMH
- Khlid A. Mughal, R.W. Rasmussen.
- Ivan Bayross Publisher- B.P.B
- by E.Balaguruswami
- Khalid Mughal





## Dot Net Technology

BCA 303

Max Marks : 80

Min Marks : 27

**Note :** The Question Paper Setter is advised to prepare unit-wise question with the provision of internal choice.

### UNIT-I Inside the .Net Framework

Overview of .Net framework, Features of .Net, CLR, Common Language Specification, JIT compilation, MSIL, Namespace, FCL, Assemblies, Common Type System, Cross Language, Interoperability, Garbage Collection.

### UNIT- II Programming with VB.Net

Data types, Variables, Constant, Type Conversions, Operators, Control Structure : Conditional Statement, loops(do loop, for loop, while loop, for Each...Next loop), arrays, Declaring arrays and dynamic arrays, Types, Structure, Enumeration, Sub Procedure, Functions.

### Unit- III Windows Form:

Windows Form: Working with visual Studio IDE, Creating a .Net Solution, simple forms, MDI forms, windows forms: Control class, TextBox, Richtextboxes, Labels, Button, Checkbox, Radio Button, Panels, Group box, Listbox , Checked list box, Combobox ; Picture box, Scrollbar, Timer, Trackbar, Progress bar. MsgBox Function, Message Box. Show Method, Input Box function, Creating MDI application. Menus, creating Menu, sub menu Items, Context Menu.

### Unit- IV OOPS concept

Class and objects, creating classes, objects, creating data member, creating class shared data member, shared methods, shared properties, overloading methods and properties, with statement, constructor, Destructor(using finalize method), Inheritance, overriding base class member, inheriting constructor, overloading base class member.

### Unit- V Database Programming

Database concept, ADO.net Architecture, .Net Data Provider( Connection class: OleDbConnection,SqlConnection, Command class : SqlCommand class, OleDbCommand class, DataAdapter class, DataReader class), Dataset Component, Creating Database application using windows forms(DB connectivity through ADO.Net), accessing data from database, navigate in data, working with Data Grid.

### BOOKS RECOMENDED:

- MSDN online – By Microsoft.
- Visual Basic .NET Complete – BPB Publications, New Delhi.
- The Complete Reference VB. NET – Jeffery R. Shapiro, Tata McGraw Hill.
- Visual Basic .NET Programming Black Book – Steven Holzner by Dreamtech Press.



**Software Engineering**  
**Subject Code - BCA-304**

Max Marks : 80

Min Marks : 27

**Note :** The Question Paper setter is advised to prepare unit-wise question with the provision of internal choice. Only Simple calculators allowed not scientific calculator.

**UNIT - I**

**Software Engineering Fundamentals:** Definition of software product; software development paradigms; software engineering; knowledge engineering and end user development approaches.

**Software Analysis:**

Abstraction; partitioning and projection; system specification; software requirements specification (SRS) standards; formal specification method; specification tools; flow based, data based and object orientated analysis.

**UNIT - II**

**Systems Design:** Idealised and constrained design; process oriented design (Gane and Sarson and Yourdon notations); data oriented design (Warnier – (Orr, E-r modeling); Object oriented design (Booch approach); Cohesion and coupling; Design metrics; design documentation standards.

**UNIT - III**

**Role of Case Tools:** Relevance of case tools; High-end and low-end case tools; Automated support for data dictionaries, data flow diagrams, entity relationship diagrams. **Coding And Programming:** Choice of programming languages; mixed language programming and call semantics; Re-engineering legacy systems; coding standard.

**UNIT - IV**

**Software Quality And Testing:** Software quality assurance; types of software testing (white box, black box, unit, integration, validation, system etc); debugging and reliability analysis; program complexity analysis; software quality and metrics; software maturity model and extensions. Software cost and Time estimation. Functions points; issues in software cost estimation; introduction to the Rayleigh curve<sup>3</sup>; algorithmic cost model (COCOMO, Putnam-slim, Watson and felix).

**UNIT - V**

**Software Project Management:** Planning software projects; work background structures; integrating software, software design and project planning; software project teams; project monitoring and controls.

**RECOMENDED BOOKS:**

1. Software Engineering: A Practitioner's Approach – by Essman Roger, Tata McGraw Hill
2. An Integrated approach to Software Engineering – by Jalote Pankaj, Narosa: New Delhi.

The image shows five handwritten signatures in black ink, arranged horizontally. From left to right, they appear to be: 1. A signature that looks like 'J. Jalote'. 2. A signature that looks like 'A. K. Jain'. 3. A signature that looks like 'A. K. Jain'. 4. A signature that looks like 'A. K. Jain'. 5. A signature that looks like 'A. K. Jain'.

**Data Structure**  
**Subject Code - BCA-305**

**Max Marks : 80**

**Min Marks : 27**

**Note : The Question Paper setter is advised to prepare unit-wise question with the provision of internal choice. Only Simple calculators allowed not scientific calculator.**

**UNIT – I INTRODUCTION –**

Introduction, Basic terminology, Elementary data organization, Data structure, Data structure operation, Algorithms: complexity, time-space Tradeoff. Mathematical Notation and functions, Algorithmic Notation

**UNIT – II  
CONCEPTS OF ARRAYS, RECORDS AND POINTERS –**

Basic Terminology, Linear Array; Single Dimensional Array, Multidimensional Array, Static Array, Dynamic Array; **Pointers:** Introduction of Pointer, **Records:** Record Structures.

**UNIT – III  
LINKED LISTS, STACKS, QUEUES, RECURSION –**

Link lists, Traversing a linked list, searching a linked list; Insertion into a linked List, Deletion from a Linked List, Stacks, Array Representation of Stack; Queues.

**UNIT – IV  
TREES -**

Binary Trees, Representing Binary Trees in Memory, Traversing binary tree, Traversal Algorithms using stacks, header nodes; threads, Binary Search Tree, Searching and Inserting in Binary Search Tree, Deleting in Binary Search tree

**UNIT - V  
SORTING AND SEARCHING –**

**Sorting:** Bubble Sort, Quick Sort, Insertion Sort, Selection Sort, Merge Sort; **Searching:** Linear Search, Binary Search, Searching and data modification, Introduction to hashing.

**BOOKS RECOMMENDED :**

- |                                    |  |
|------------------------------------|--|
| 1. Data Structure                  | - Seymour Lipschutz (Schaum's Series).                 |
| 2. Data Structure & Program Design | - Robert L. Kruse, 3 <sup>rd</sup> Ed., Prentice Hall. |



**Computer System Architecture**  
**Subject Code - BCA-306**

Max Marks : 80

Min Marks : 27

Note : The Question Paper setter is advised to prepare unit-wise question with the provision of internal choice. Only Simple calculators allowed not scientific calculator.

**UNIT I**

Data Representation – Data Types, Number System, Fixed Point Representation – 1's, 2's complements, Binary Fixed point representation, Arithmetic operation on Binary operation, Overflow & Underflow, Codes. ASCII, EBCDIC codes, Grey codes, Excess-3, BCD codes, Error detection & correcting codes.

**UNIT II**

Digital Logic Circuits – Logic Gates AND, OR, NOT, Gates & their truth tables, NOR, NAND & XOR Gates, Boolean algebra, Basic Boolean Law, Demorgan's theorem, Map Simplification, Minimizing technique, K Map, Sum of products, Product of sums, Combinational & sequential Circuits Half adder & Full adder, Full Subtractor, Flip Flop – RS, D, JK & T Flip Flop, Shift register, RAM & ROM.

**UNIT III**

CPU organization, ALU & control circuit, Idea about arithmetic circuits, Program control, Instruction sequencing, Introduction to Microprocessor, System buses, Registers, Program counter, Block diagram of a Macro computer system, Microprocessor control signals, Interfacing Devices, Introduction to Motherboard, SMPS

**UNIT IV**

Input output organization, I/O Interface, Properties of simple I/O devices and their Controller, Isolated versus Memory mapped I/O, Modes of Data transfer, Synchronous & Asynchronous Data Transfer, Handshaking, Asynchronous serial transfer, I/O processor

**UNIT V**

Auxiliary memory - Magnetic drum, Disk & Tape, Semi conductor memories, Memory Hierarchy, Associative memory, Virtual memory, address space & memory space, Address mapping, Page table, Page replacement, cache memory, Hit ratio, Mapping Techniques, Writing into cache.

**REFERENCE:**

1. Computer System architecture – M. Moris Mano
2. Computer Architecture and Organization – Nicholas P Carter, Schaum's Outlines
3. Computer Organization and Architecture – William Stallings

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### PRACTICAL WORK BCA-307 Programming Lab in Java

**1. Scheme of Examination:-** Practical examination will be of 3 hours duration. The distribution of

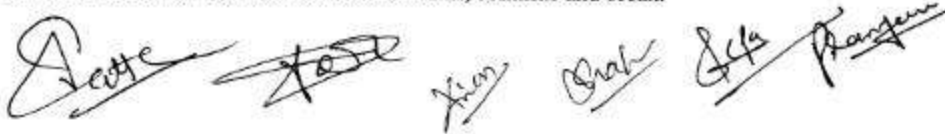
practical marks will be as follows:

Programme 1	-20
Programme 2	-20
Programme 3	-20
Viva	-20
Practical Copy + Internal Record	-20
Total -100	

2. In every program there should be comment for each coded line or block of code
3. Practical file should contain printed programs with name of author, date, path of program, unit no. and printed output.
4. All the following programs or a similar type of programs should be prepared

#### **List of Practical**

1. WAP that implements the Concept of Encapsulation.
2. WAP to demonstrate concept of function overloading of Polymorphism.
3. WAP to demonstrate concept of constructor overloading of Polymorphism.
4. WAP the use boolean data type and print the Prime number Series up to 50.
5. WAP to print first 10 number of the following Series using Do-While Loops 0, 1, 1, 2, 3, 5, 8, 11,...
6. WAP to check the given number is Armstrong or not.
7. WAP to find the factorial of any given number.
8. WAP to sort the element of One Dimensional Array in Ascending order.
9. WAP for matrix multiplication using input/output Stream.
10. WAP for matrix addition using input/output stream class.
11. WAP for matrix transposes using input/output stream class.
12. WAP to add the elements of Vector as arguments of main method (Run time) and rearrange them, and copy it into an Array.
13. WAP to check that the given String is palindrome or not.
14. WAP to arrange the String in alphabetical order.
15. WAP for StringBuffer class which perform the all methods of that class.
16. WAP to calculate Simple Interest using the Wrapper Class.
17. WAP to calculate Area of various geometrical figures using the abstract class.
18. WAP where Single class implements more than one interfaces and with help of interface reference variable user call the methods.
19. WAP that use the multiple catch statements within the try-catch mechanism.
20. WAP where user will create a self-Exception using the "throw" keyword.
21. WAP for multithread using the isAlive(), join() and synchronized() methods of Thread class.
22. WAP to create a package using command and one package will import another package.
23. WAP for JDBC to insert the values into the existing table by using prepared Statement.
24. WAP for JDBC to display the records from the existing table.
25. WAP for demonstration of switch statement, continue and break.

*h*  


### BCA308- LAB VII: Dot Net Technology Lab

#### 1. Scheme of Examination :-

Practical Examination will be of 3 hours duration. The distribution of practical marks is as follows:

Program1	-	20
Program2	-	20
Program3	-	20
Viva-20		
[Practical Record + Internal Record]	-	20
<b>Total</b>		<b>-100</b>

#### List of Practical

1. Write a program to find maximum between three numbers.
2. Write a program to check whether a number is negative, positive or zero.
3. Write a program to check whether a year is leap year or not.
4. Write a program to check whether a character is alphabet or not.
5. Write a program to find all roots of a quadratic equation
6. Design an application to input marks of five subjects Physics, Chemistry, Biology, Mathematics and Computer. Calculate percentage and grade according to following:  
Percentage  $\geq$  90% : Grade A  
Percentage  $\geq$  80% : Grade B  
Percentage  $\geq$  70% : Grade C  
Percentage  $\geq$  60% : Grade D  
Percentage  $\geq$  40% : Grade E  
Percentage  $<$  40% : Grade F
7. Design an application to input basic salary of an employee and calculate its Gross salary according to following:  
Basic Salary  $\leq$  10000 : HRA = 20%, DA = 80%  
Basic Salary  $\leq$  20000 : HRA = 25%, DA = 90%  
Basic Salary  $>$  20000 : HRA = 30%, DA = 95%
8. Design an application to input electricity unit charges and calculate total electricity bill according to the given condition:  
For first 50 units Rs. 0.50/unit  
For next 100 units Rs. 0.75/unit  
For next 100 units Rs. 1.20/unit  
For unit above 250 Rs. 1.50/unit  
An additional surcharge of 20% is added to the bill
9. Write a program to convert decimal to binary number system using bitwise operator.
10. Write a program to swap two numbers using bitwise operator
11. Write a program to create Simple Calculator using select case.
12. Write a program to find sum of all natural numbers between 1 to n
13. Write a program to find first and last digit of any number
14. Write a program to enter any number and print its reverse.

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*Time*

*Mark*

*Sd/- Praveen*

15. Write a program to enter any number and check whether the number is palindrome or not.
16. Write a program to check whether a number is Armstrong number or not.
17. Write a program to print Fibonacci series up to n terms.
18. Write a program to print Pascal triangle upto n rows.
19. Write a program to print all negative elements in an array.
20. Design a digital clock using timer control.



21. Design an application that accepts the item name from the user and add it to a listbox and combobox.



22. Create an application that offers various food items to select from check boxes and a mode of payment using radio button. It then display the total amount payable.
23. Create an application to implement the working of Context menu on textbox.
24. WAP to illustrate all functionalities of listbox and combobox.
25. WAP using checkboxes for the following font effects.
  - Bold
  - Italic
  - Underline
  - Increase Font size
  - Decrease Font size
  - Font Color
25. WAP for temperature conversion using radiobutton.
26. WAP to launch a rocket using PictureBox and Timer control.
27. WAP to change the back color of any control using scrollbar.
28. WAP to search an element for one dimensional array.

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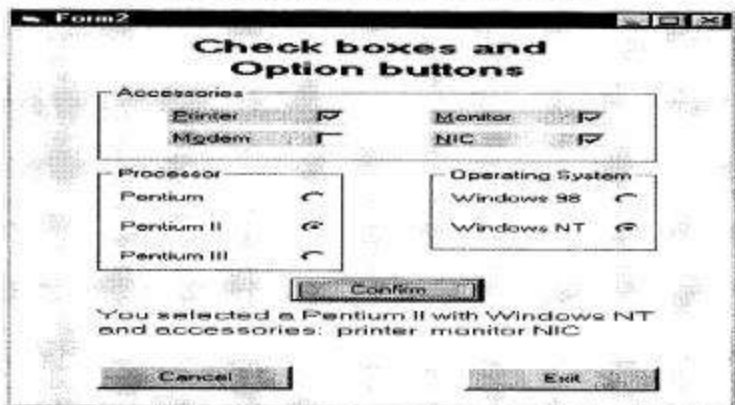
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29. Design a menu such that it contain submenu such as Addition, Subtraction, Scalar Multiplication, Multiplication, Transpose of two metrics.
30. WAP to find greatest among three given number using user define procedures.
31. WAP to calculate factorial of a number using user define procedure.
32. WAP to check whether given number is neon or not using user define function.
33. WAP to check whether a given number is Niven or not using procedure.
34. WAP to check whether a given number is duck number or not.
35. WAP to check whether a given number is spy number or not.
36. WAP to check whether a given number .
37. Design the following application using radiobutton and checkbox :



38. Design an application to Create the Payroll form shown below. Number of hours must be entered as well as the appropriate rate.

Gross salary = rate \* hours.

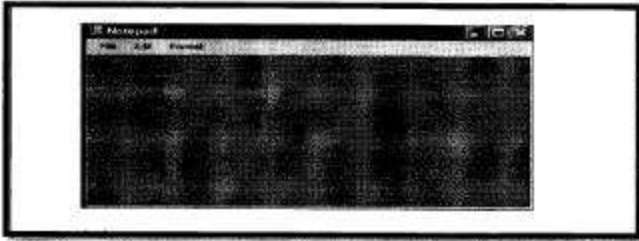
Net salary = gross salary - deductions.



39. Develop an application which is similar to notepad using menus.

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40. Develop an application for facilitating purchasing order



41. Develop an application for billing system in coffee shop



42. Develop an application which is similar to login form

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User Name:   
 Password:

43. Define a Class 'ACCOUNT'. Include following Data members: Name of depositor, Account no, type of Account, balance amount. Member Functions: To Deposit an amount, to withdraw an amount after checking balance, to show balance. Also provide proper validations wherever necessary. Write a main program to test above class.

44. Develop a project which displays the student information in the relevant fields from the database which already exists.

**Form1**  
 ID:   
 Name:   
 Qualification:   
 Grade:

45. Define structure student. Structure student has data members for storing name, rollno, name of three subjects and marks. Write member function to store and print data.

46. Write a class having name Calculate that uses static overloaded function to calculate area of circle, area of rectangle and area of triangle.

47. Create a class account that stores customer name, account number and type of account. From this derive the classes cur\_acct and sav\_acct to make them more specific to their requirements. Include necessary member functions in order to achieve the following tasks:

- Accept deposit from customer.
- Display the balance
- Computer and deposit interest.

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- d) Permit withdrawal and update the balance.  
 e) Check for the minimum balance, impose penalty, necessary and update the balance.
48. Create a class circle with data member radius; provide member function to calculate area.  
 Derive a class sphere from class circle; provide member function to calculate volume. Derive class cylinder from class sphere with additional data member for height and member function to calculate volume.
49. Consider an example of declaring the examination result. Design three classes:- student, exam and result. The student class has data members such as that representing roll number, name of student. Create the class exam, which contains data members representing name of subject, minimum marks, maximum marks, obtained marks for three subjects. Derive class result from both student and exam classes. Test the result class in main function.
50. WAP that implements the Concept of Encapsulation.
51. WAP to demonstrate concept of Polymorphism (function Overloading and constructor Overloading).
52. Create a class Student having data members to store roll number, name of student, name of three subjects, max marks, min marks, obtained marks. Declare an object of class student. Provide facilities to input data in data members and display result of student.
53. Create a class Student having data members to store roll number, name of student, name of three subjects, max marks, min marks, obtained marks. Declare array of object to hold data of 3 students. Provide facilities to display result of all students. Provide also facility to display result of specific student whose roll number is given.
54. Create a class array having an array of integers having 5 elements as data member provide following facilities:  
 a) Constructor to get number in array elements.  
 b) Sort the elements.  
 c) Find largest element  
 d) Search for presence of particular value in array element.
55. WAP to display records of a table using dataadapter and code for buttons to move at first record, next record, previous record, last record in the table.
56. Create a table for employee and write a program using **Dataset** to add, delete, edit & navigate records.
57. WAP to access a database using **ADO.net** & display a key column in the combo box or list box when an item is selected in it, its corresponding records is shown in **Datagridcontrol**.



पं.रविशंकर शुक्ल विश्वविद्यालय, रायपुर (छ.ग.)

**M.Com. Syllabus**  
(Semester & Annual Pattern)  
Session 2022-24

सत्र 2021-23 का पाठ्यक्रम 2022-24 हेतु यथावत् प्रभावशील किया गया है।

पं. रविशंकर शुक्ल विश्वविद्यालय, रायपुर (छत्तीसगढ़)

एम.कॉम. सेमेस्टर परीक्षा

पाठ्यक्रम (सत्र 2019-20 से लागू)

M.Com. I<sup>st</sup> Semester

प्रश्न पत्र	प्रश्न पत्र का नाम	पूर्णांक	पेपर कोड
प्रश्नपत्र I Paper I	प्रबंधकीय अर्थशास्त्र Managerial Economics	80 + 20	101
प्रश्नपत्र II Paper II	बृहत (उच्चतर) लेखांकन Advanced Accounting	80 + 20	102
प्रश्नपत्र III Paper III	आयकर विधान एवं लेखे (Income Tax Law and Accounts)	80 + 20	103
प्रश्नपत्र IV Paper IV	सांख्यिकीय विश्लेषण Statistical Analysis	80 + 20	104
प्रश्नपत्र V Paper V	निगमित विधि संरचना Corporate Legal Framework	80 + 20	105

M.Com. II<sup>nd</sup> Semester

प्रश्न पत्र	प्रश्न पत्र का नाम	पूर्णांक	पेपर कोड
प्रश्नपत्र VI Paper VI	व्यवसायिक अर्थशास्त्र Business Economics	80+20	201
प्रश्नपत्र VII Paper VII	विशिश्टकृत लेखांकन Specialized Accounting	80+20	202
प्रश्नपत्र VIII Paper VIII	कर नियोजन एवं प्रबन्ध (Tax Planning and Management)	80+20	203
प्रश्नपत्र IX Paper IX	उच्चतर सांख्यिकी Advanced Statistics	80 + 20	204
प्रश्नपत्र X Paper X	व्यावसायिक सन्नियम Business Laws	80 + 20	205

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**M.Com. I\* Semester (2019-20)**

**PAPER-I  
MANAGERIAL ECONOMICS**

M.M. 80+20

**OBJECTIVE:**

This course develops managerial, perspective to economic fundamentals as aids to decision making under given environmental constraints.

**COURSE INPUTS:**

- UNIT-1 Nature and Scope of Managerial, Economics: Objective of a firm; Economics theory and managerial theory; Managerial economist's role and responsibilities.
- UNIT-2 Fundamental economic concepts-incremental principle, opportunity cost principle, discounting principle, equi-marginal principle.
- UNIT-3 Demand Analysis: Individual and Market demand functions Law of demand; determinants of demand; Elasticity of demand-its meaning and importance, Price elasticity; income elasticity and cross elasticity; Using elasticity 'in managerial decisions.
- UNIT-4 Theory of consumer Choice: Cardinal utility approach, indifference approach, revealed preference and theory of consumer choice under risk; Demand estimation for major consumer durable and non-durable products; Demand forecasting tech. technique.
- UNIT-5 Production Theory: Production function-production with one and two variable inputs, Stages of production; Economics of scale; Estimation of production function.

**PAPER - II  
ADVANCED ACCOUNTING**

M.M. 80+20

**OBJECTIVE:**

The objective of this course is to expose students to accounting issues and practices such as maintenance of company accounts and handling' accounting adjustments.

**COURSE INPTS:**

- UNIT-1 Accounting for issue, Forfeited and redemption of shares and debentures.
- UNIT-2 Final accounts and financial statements of companies.
- UNIT-3 Accounting issues relative to amalgamation and reconstruction of companies.
- UNIT-4 Accounting for holding and subsidiary companies.
- UNIT-5 Accounts relating to Liquidation of companies.

**REFERENCES.**

- Beams, F.A. : Advanced Accounting, Prentice Hall, ,New Jersey., Dearden, J. and S.K. Bhattacharya: Accounting for Management, Vikas Publishing House, New Delhi.
- Engler, C.L.A Bernstein. and K.R. Lambert: Advanced Accounting, with Chicago. Fischer, P.M.,W.J. Taylor and J.A. Leer: Advanced Accounting, South-Western, Ohio. Gupta. R.L.: Advanced Financial Accounting, S.Chand & Co., New Delhi.
- Keiso D.E. and J.J. Weygand: Intermediate Accounting, John Wiley and Sons, NY.
- Maheshwari, S.N.: Advanced Accountancy- Vol.II Vikash Publishing House, New Delhi
- Monga, J.R. : Advanced Financial Accounting, Mayoor Paperbacks, Noida Narayanaswamy, R: Financial Accounting: A Managerial Perspective, Prentice Hall of India, Delhi.
- Neigs, R.F. : Financial Accounting, Tata McGraw Hill, New Delhi.
- Shukla, M.G. and T.S.Grewal : Advanced Accountancy, Sultan Chard & Co. New Delhi.
- Warren, C.S. and P.E. Fess: Principles of Financial and Managerial Accounting, South Western, Ohio.

**RECOMMENDED BOOKS:**

- 1. Plekles and Duakerley : Accountancy
- 2. Wilson: Company Accounts

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3. Diskson: Accountancy
4. J.R. Batliboi : Advanced Accounting
5. R.R. Gupta: Advanced Accounting
6. S.M. Shukla : Advanced Accounting
7. Shukla and Grewal: Advanced Accounting
8. H Chakravarty : Advanced Accounts
9. Dr. Shukla Avam Agrawal: Advanced Accountancy
10. Dr. S.S. Gupta: Advanced Accounts
11. Dr. Karim, Dr. Khanuja & Pro. Mehata : Advanced Accounting
12. डॉ. करीम, डॉ. खनूजा एवं प्रो. मेहता : वृहत लेखाकर्म
13. जे. के. अग्रवाल तथा आर.के. अग्रवाल : उच्च वित्तीय एवं कम्पनी लेखांकन
14. आर.के. गुप्ता : उन्नत लेखांकन
15. Basu Das : Advanced Accounting

M. Com - 1<sup>st</sup> Semester

**आयकर विधान एवं लेखे (प्रश्नपत्र - III)**

**Income Tax Law and Accounts (Paper - Third)**

**OBJECTIVE**

**M.M. : 80**

The objective of this course is to help student understand and conceptual framework of Income tax.

<b>Unit - I</b>	<b>Law relating to Income tax</b> : Brief study of the main provisions of the Indian Income Tax Act. Important definitions. Income exempted from tax, Residence and Tax liability.
<b>Unit - II</b>	<b>Calculation of taxable income under the head</b> : Salary and House property.
<b>Unit - III</b>	<b>Depreciation and Development allowance, Calculation of taxable Income under the head</b> : Business and Profession, capital gains, income from other sources.
<b>Unit - IV</b>	Set off and carry forward of losses, Deduction from gross total Income Calculation of taxable Income and tax of an individual, and Hindu undivided Families.

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<b>Unit - V</b>	Appeals & Revisions Reference of High Court and Supreme court, offences & penalties, Income tax authorities.
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**M. Com - 1<sup>st</sup> Semester**

(Compulsory) Paper - IV (Paper Code.....)

**STATISTICAL ANALYSIS**

M.M.: 80

**OBJECTIVE**

The Objective of this course is to help student learn the application of statistical tools and techniques for decision making.

- UNIT-1 Statistics - Definitions, Characteristics, Scope and Nature, Fractions, limitations, Distrust and misuse importance & Statistical Investigations., Classification & Tabulation,
- UNIT-2 Data Sources: Primary and Secondary, Primary data collection techniques, Schedule, Questionnaire and interview & Sources' of Secondary data.
- UNIT-3 Dispersion, Co-efficient of variance and skewness, correlation - Karl- Pearsons and spearman's ranking method and Regression analysis, Two variables case.
- UNIT-4 Probability Theory: Probability classical, relative and subjective probability, Addition and multiplication probability models - Conditional probability and Baye's Theorem.
- UNIT-5 Probability Distributions - Binomial, poisson and Normal Distributions, Their characteristics and applications.

**M. Com - 1<sup>st</sup> Semester**

**UNDER MANAGEMENT BOARD**

(Compulsory) Paper - V (Paper Code.....)

**CORPORATE LEGAL FRAMEWORK**

M.M.: 80

**OBJECTIVE**

The Objective of this course is provide knowledge of relevant provisions of various laws influencing business operations.

- UNIT-1 The Companies Act, 1956 (Relevant Provisions) : Definition, types of companies  
  
Memorandum of association; Articles of association; Prospectus; Share capital and membership.
- UNIT-2 Meetings and resolutions - Company management; Managerial remuneration; Winding up and dissolution of companies.
- UNIT-3 The Negotiable Instruments Act, 1881 - Definition, types of negotiable instruments; Negotiation; Holder and holder in due course; payment in due course;
- UNIT-4 Endorsement and crossing of cheque; Presentation of negotiable instruments.
- UNIT-5 Legal Environment for Security Markets; SEBI Act, 1992-organisation and objectives of

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M.Com. II<sup>nd</sup> Semester

PAPER - VI  
BUSINESS ECONOMICS

M.M. 80+20

OBJECTIVE -

This course develops managerial perspective to economic fundamentals' as aids to decision making under given environmental constraints.

- UNIT-1 Cost Theory and Estimation, economic value analysis, Short and long run cost functions- their nature, shape and inter-relationship; law of variable proportions;-law of returns to scale.
- UNIT-2 Price Determination under Different Market Conditions: Characteristics of different market structures; Price determination and firm's equilibrium in short-run and long-run under perfect competition, monopolistic competition, oligopoly and monopoly.
- UNIT-3 Pricing Practices: Methods of price determination in practice, pricing of multiple products; price discrimination; International price discrimination and dumping; Transfer pricing.
- UNIT-4 Business Cycles: Nature and phases of the business cycle; Theories of business cycles- psychological, profit, monetary, innovation, cobweb, Samuelson and Hicks theories.
- UNIT-5 Inflation: Definition, Characteristics and types; Inflation in terms of demand- pull and cost-push factors; Effects of inflation.

PAPER - VII  
SPECIALISED ACCOUNTING

M.M. 80+20

OBJECTIVE.

The objective of this course is to expose students to accounting issues and practices such as maintenance of company accounts and handling accounting adjustments.

- UNIT-1 Accounts of General Insurance Companies.
- UNIT-2 Accounts of Banking Companies.
- UNIT-3 Accounts of Public Utility concerns: Double Accounts System.
- UNIT-4 Royalty accounts.
- UNIT-5 Investment accounts.

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M. Com - 2<sup>nd</sup> Semester

कर नियोजन एवं प्रबन्ध (प्रश्नपत्र - VIII)

TAX PLANNING AND MANAGEMENT (Paper - VIII)

M.M. : 80

OBJECTIVE -

This course aims at making students conversant with the concept of corporate tax planning and Indian tax laws, as also their implications for corporate management.

Unit - I	Calculation of taxable Income and tax of Firm and Companies.
Unit - II	Return of Income, Provisional Regular, Expert and emergency assessment, Re opening of assessment.
Unit - III	Concept of tax Planning ; Tax avoidance and tax evasions ; Tax planning with reference of location, nature and form of organization of new
Unit - IV	Tax planning to capital structure, decision dividend policy ; Inter corporate dividends and bonus shares.
Unit - V	Preparation of income tax returns, Computation of Income tax, Tax deduction at source; Advance payment of tax.

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(Compulsory) Paper - IX (Paper Code \_\_\_\_\_)  
ADVANCED STATISTICS

M.M.: 80

OBJECTIVE

The Objective of this course is to help student learn the application of statistical tools and techniques for decision making.

- UNIT-1 Statistical Decision Theory: Decision environment, Expected profit under uncertainty and assigning probabilities and utility theory.
- UNIT-2 Statistical Estimations, and Testory: Point and interval estimation of population mean, proportion and variance Statistical Testing - Hypothesis and Errors, Sample size - Large and Small Samplingtest Z tests, T Tests & F Tests.
- UNIT-3 Association of Attributes : Two Attributes, consistency of data, measurement of Association of Attributes - Percentage method, Co-efficient of Association, Comparison of Actual and (you ie method) Expected frequency's & Issusery Association. .
- UNIT-4 Statistical Quality Control: Causes of Variations in quality characteristics, Quality Control charts-purpose and logic, Process under control and out of control, warning limits, control charts for attributes-fraction defectives and number of defects, Acceptance sampling.
- UNIT-5 Interpolation and Extrapolation - Parabolic Bionomial, Newton and long rages method.

(Compulsory) Paper - X ( Paper Code ..... )  
Business Laws

M.M. 80

OBJECTIVE

The Objective of this course is provide knowledge of relevant provisions of various laws influencing business operations.

- UNIT-1 SEBI Act-1992: Organisation and objectives of SEBI, Functions and Role of SEBI Rights and Power of SEBI.
- UNIT-2 MRTP Act 1969: Monopolistic Trade Practice Meaning, essentials, Restrictive Trade Practices - Meaning, Unfair trade practice, MRTP commission offences and Penalties.
- UNIT-3 Consumer Protection Act 1986: Needs of Act, Rights of consumers, Objectives of Act., Grievance redressal Machinery, District Forum, State Commission, National Commission.
- UNIT-4 FEMA Act 1999: Objectives; Regulation and Management of FEMA, Penalties Appeal.
- UNIT-5 W.T.O.: Brief History of WTO, Objectives and Functions, Organisation, W.T.O. and India, Regional groupings, anti-dumping duties and other NTBs, Doha declaration, Dispute settlement system, TRIP, TRIMS and GATS.

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M. Com. III<sup>rd</sup> Semester (Compulsory Papers)

प्रश्न पत्र	प्रश्नपत्र का नाम	पूर्णांक	पेपर कोड
Paper - I प्रश्नपत्र - I	प्रबन्ध की अवधारणा (Management Concept)	80+20	301
Paper - II प्रश्नपत्र - II	संगठनात्मक व्यवहार (Organisational Behaviour)	80+20	302
Paper - III प्रश्नपत्र - III	उच्चतर लागत लेखांकन (Advance Cost Accounting)	80+20	303
Paper - IV प्रश्नपत्र & IV	प्रबंधकीय लेखांकन (Management Accounting)	80+20	304
Paper - V प्रश्नपत्र - V	प्रबंधकीय निर्णय के लिए लेखांकन (Accounting for managerial decision)	80+20	305

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M. Com. IV<sup>th</sup> Semester

Special attention to the Students. Students are required to select any one Specialization out of four suggested below.

**Optional - Specialization**

- Optional Group - (A) Marketing  
Optional Group - (B) Management  
Optional Group - (C) Banking and Insurance  
Optional Group - (D) Taxation and Accounting

Optional Group - (A) विपणन (Marketing)

प्रश्न पत्र	प्रश्नपत्र का नाम	पूर्णांक	पेपर कोड
Paper - A I प्रश्नपत्र - A I	विपणन के सिद्धान्त (Principle of Marketing)	80+20	401
Paper - A II प्रश्नपत्र - A II	विज्ञापन एवं विक्रय प्रबन्ध (Advertising & Sales Management)	80+20	402
Paper - A III प्रश्नपत्र - A III	विपणन अनुसन्धान (Marketing Research)	80+20	403
Paper - A IV प्रश्नपत्र - A IV	अन्तर्राष्ट्रीय विपणन (International Marketing)	80+20	404

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**Optional Group – (B) प्रबन्ध (Management)**

प्रश्न पत्र	प्रश्नपत्र का नाम	पूर्णांक	पेपर कोड
Paper – B I प्रश्नपत्र – B I	वित्तीय प्रबन्ध (Financial Management)	80+20	411
Paper – B II प्रश्नपत्र – B II	कार्मिक प्रबन्ध (Personnel Management)	80+20	412
Paper – B III प्रश्नपत्र – B III	उत्पादन प्रबन्ध (Production Management)	80+20	413
Paper – B IV प्रश्नपत्र – B IV	व्यूहरचना प्रबन्ध (Strategic Management)	80+20	414

**Optional Group – (C) बैंकिंग एवं बीमा (Banking and Insurance)**

प्रश्न पत्र	प्रश्नपत्र का नाम	पूर्णांक	पेपर कोड
Paper – C I प्रश्नपत्र – C I	बैंकिंग व्यवहार (Banking Practices)	80+20	421
Paper – C II प्रश्नपत्र – C II	भारत में बैंकिंग संस्थाए (Banking Institution in India)	80+20	422
Paper – C III प्रश्नपत्र – C III	जीवन बीमा (Life Insurance)	80+20	423
Paper – C IV प्रश्नपत्र – C IV	सामान्य बीमा (General Insurance)	80+20	425

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**Optional Group – (D) करारोपण एवं लेखांकन (Taxation and Accounting)**

प्रश्न पत्र	प्रश्नपत्र का नाम	पूर्णांक	पेपर कोड
Paper – D I प्रश्नपत्र – D I	भारत में प्रत्यक्ष कर (Direct Tax in India)	80+20	431
Paper – D II प्रश्नपत्र – D II	एकीकृत वस्तु एवं सेवा कर (Integrated Goods & Service Tax)	80+20	432
Paper – D III प्रश्नपत्र – D III	सेवा के क्षेत्र में लेखांकन (Accounting in Service Sector)	80+20	433
Paper – D IV प्रश्नपत्र – D IV	लेखांकन पद्धतियाँ (Accounting Methods)	80+20	434

**महत्वपूर्ण नोट :**

1. सत्र 2014–15 से एम. कॉम. प्रथम, द्वितीय एवं तृतीय सेमेस्टर में सभी प्रश्न-पत्र अनिवार्य होंगे। उक्त परीक्षा में वैकल्पिक प्रश्न-पत्र चयन की व्यवस्था नहीं होगी।
2. एम. कॉम. चतुर्थ सेमेस्टर में विशिष्टीकरण समूह (A), (B), (C) या (D) में से किसी भी एक वैकल्पिक समूह का चयन कर उस समूह के सभी चार प्रश्न-पत्र अनिवार्य रूप से लेने होंगे।
3. एम. कॉम. चतुर्थ सेमेस्टर में उपरोक्त विशिष्टीकरण समूह के अतिरिक्त 50 अंक की मौखिक परीक्षा तथा 50 अंक का परियोजना प्रतिवेदन (अधिकतम 50 पृष्ठों का) तैयार करना अनिवार्य होगा। यह प्रतिवेदन वाणिज्य या प्रबन्ध विषय से सम्बन्धित होगा।
4. सभी प्रश्न-पत्रों में लिखित परीक्षा 80 अंकों की तथा 20 अंकों की आन्तरिक मूल्यांकन परीक्षा होगी। आन्तरिक मूल्यांकन के अंक परीक्षार्थियों की उपस्थिति, सेमीनार, शोध एवं शैक्षणिक कार्य में भागिता, इकाईवार मूल्यांकन परीक्षा आदि के आधार पर प्रदान किये जायेंगे।
5. आन्तरिक परीक्षा एवं बाह्य परीक्षा में प्रश्नपत्रवार न्यूनतम उत्तीर्णांक 20% होगा। जो अध्यादेश क्रमांक 170 के प्रावधानों के अनुसार बंधनकारी होगा।

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05-07-19