III & IV Semester B.Com (Voc)(Computer Application) Curriculum

Sl. No.	Course Code	Title of the Course	Category of Courses	Teaching Hours per Week	SEE	IA	Total Marks	Credits
		Semester III						
1		**Language–I**	**Lang**	4	80	20	100	3
2		**Language–II**	**Lang**	4	80	20	100	3
3	B.Com-CAT-3.1	Corporate Accounting – I	**Core**	5	80	20	100	5
4	**B.Com-CAT-3.2**	Income Tax – I	**Core**	5	80	20	100	5
5	**B.Com-CAT-3.3**	**Java Programming**	**Core**	4	80	20	100	3
6.	**B.Com-CAT-3.4**	**Operating System**	**Core**	2	40	10	50	2
7.	**B.Com-CAP-3.1**	**Java Programming**	**Practical**	4	40	10	50	2
8.	**B.Com-CAT-3.5**	**Cloud Computing**	**Compulsory**	2	40	10	50	2
				30			**650**	**25**

Sl. No.	CourseCode	TitleoftheCourse	Category of Courses	Teaching Hours perWeek	SEE	IA	Total Marks	Credits
		Semester IV						
1		**Language–I**	**Lang**	4	80	20	100	3
2		**Language–II**	**Lang**	4	80	20	100	3
3	B.Com-CAT-4.1	Corporate Accounting – II	**Core**	5	80	20	100	5
4	**B.Com-CAT- 4.2**	Income Tax – II	**Core**	2	40	10	50	2
5	**B.Com-CAT- 4.3**	Web Application Development	**Core**	4	80	20	100	3
6.	**B.Com-CAT- 4.4**	Computerized Accounting	**Core**	4	80	20	100	3
7.	**B.Com-CAP-4.1**	Web Application Lab	**Practical**	4	40	10	50	2
8.	**B.Com-CAP-4.2**	Computerized Accounting Lab	**Practical**	4	40	10	50	2
9.	**B.Com-CAT 4.5**	**Income Tax – III**	**Compulsory**	2	40	10	50	2
				33			**700**	**25**

Curriculum for III Semester B.Com(Voc) (Computer Application)

ORPORATE ACCOUNTING-I			
Course Code	**B.Com-CAT-3.1**	IA Marks	**20**
Course Type (Theory/Practical/Integrated)	Theory	End Sem Marks	**80**
		Total Marks	**100**
Teaching Hours/Week	**5hrs**		
Total Hours	**60hrs**	Credits	**05**

Course Learning Objectives: The objective of the course is to
- Comprehend the significance, necessity, and management of share underwriting
- Understand the approach for calculating profit before incorporation.
- Understand the valuation of intangible assets, particularly goodwill.
- Understand the valuation of equities.
- Prepare the financial accounts of companies in accordance with the Companies Act, 2013, along with current industry practices.

Module-1 VALUATION OF GOODWILL	10 Hours

Introduction to Goodwill Valuation: Definition and Significance of Goodwill, Determinants Affecting Goodwill Value, Situations Necessitating Goodwill Valuation.

Valuation Methods for Goodwill: Average Profit Method, Capitalisation of Average Profit Method, Super Profit Method, Capitalisation of Super Profit Method, Annuity Method

Module-2 VALUATION OF SHARES	12 Hours

Introduction to Share Valuation: Definition and Significance of Share Valuation, Necessity for Share Valuation, Determinants Influencing Share Valuation.

Methods of Share Valuation: Intrinsic Value Method, Yield Method, Earning Capacity Method, Fair Value of Shares. **Specialised Subjects in Valuation**: Rights Offerings and the Valuation of Rights Offerings, Valuation of Warrants

Module-3 UNDERWRITING OF SHARES	12 Hours

Introduction to Underwriting: Definition of Underwriting, SEBI Regulations Pertaining to Underwriting, Underwriting Commission.
Underwriter: Roles of an Underwriter, Benefits of Underwriting. **Categories of Underwriting**: Designated Applications, Undesignated Applications.
Assessment of Liability in Underwriting Agreements: Fully Underwritten Agreements, Partially Underwritten Agreements, Agreements with Firm Underwriting (including issues), Agreements without Firm Underwriting (including issues)

Module-4 FINAL ACCOUNTS OF A JOINT STOCK COMPANY	14 Hours

Preparation of Financial Statements for Companies: Legal Requirements for Financial Statement Preparation, Schedule III of the Companies Act, 2013, IND AS-1: Presentation of Financial Statements. **Management of Distinct Items**: Tax Deducted at Source (TDS), Advance Tax Payment, Tax Provision, Depreciation, Interest on Debentures. Dividends - Regulations Concerning Dividend Disbursement and Allocation to Reserves. **Preparation of Financial**

Statements: Statement of Profit and Loss (in accordance with Schedule III), Balance Sheet (in accordance with Schedule III)	
Module-5 PROFIT PRIOR TO INCORPORATION	**12 Hours**
Introduction to Profit Prior to Incorporation: Definition of Profit Prior to Incorporation, Computation of Sales Ratio, Computation of Time Ratio, Computation of Weighted Ratio. **Management of Expenditures**: Management of Capital Expenditure, Management of Revenue Expenditure. **Determination of Pre-Incorporation and Post-Incorporation Profits:** Compilation of Statement of Profit and Loss in accordance with Schedule III of the Companies Act, 2013, Compilation of Balance Sheet in accordance with Schedule III of the Companies Act, 2013	

Books for reference:

- ✓ M.C. Shukla, T.S. Grewal, and S.C. Gupta. Advanced Accounts. Vol.-II. S. Chand & Co., New Delhi
- ✓ S.N. Maheshwari, and S. K. Maheshwari. Corporate Accounting. Vikas PublishingHouse, New Delhi.
- ✓ Ashok Sehgal, Fundamentals of Corporate Accounting. Taxman Publication, NewDelhi.
- ✓ V.K. Goyal and Ruchi Goyal, Corporate Accounting. PHI Learning.
- ✓ Jain, S.P. and K.L. Narang. Corporate Accounting. Kalyani Publishers, New Delhi.
- ✓ Bhushan Kumar Goyal, Fundamentals of Corporate Accounting, InternationalBook House
- ✓ P. C. Tulsian and Bharat Tulsian, Corporate Accounting, S.Chand
- ✓ Amitabha Mukherjee, Mohammed Hanif, Corporate Accounting, McGraw HillEducation

<table>
<tr><td colspan="5" align="center">**INCOME TAX - I**</td></tr>
<tr><td>Course Code</td><td>**B.Com-CAT-3.2**</td><td>IA Marks</td><td>20</td></tr>
<tr><td rowspan="2">Course Type
(Theory/Practical/Integrated)</td><td rowspan="2">Theory</td><td>End Sem Marks</td><td>80</td></tr>
<tr><td>Total Marks</td><td>100</td></tr>
<tr><td>Teaching Hours/Week</td><td>5 Hours</td><td></td><td></td></tr>
<tr><td>Total Hours</td><td>60 Hours</td><td>Credits</td><td>5</td></tr>
</table>

Course Learning Objectives: The objective of the course is to
- To familiarize the students with the Legal Provisions and Procedural aspects of Income Tax.
- To equip the students with a comprehensive understanding of direct taxes, their applications, and the tax laws governing them.
- To be taught with reference to the relevant amendments made to Direct Tax Laws of India by Finance Acts passed in the Parliament from time to time.
- Apply the knowledge of taxation in practical field.

Module - 1: Introduction	10 Hours

Definitions – Assessee – Person- Assessment Year and Previous Year – Income- Agricultural Income, Partial integration of Agricultural Income with Non-agricultural Income- Gross Total Income- Taxable Income (also known as Total Income) –Permanent Account Number (PAN)- Income tax rates of relevant assessment year for an individual assessee. Exposure to applying for PAN online. New Income Tax Bill – 2025.

Module-2: Residential Status	12 Hours

Individual – HUF-Firm-Company-Determination of Residential Status of Individual-Incidence of Tax (scope of Total Income)-Meaning -Indian Income- Foreign Income- Deemed Income- Computation of Total Income based on residential status.

Module-3: Exempted incomes U/s 10 relating to computation of Salary Income	12 Hours

Leave Travel Concession, Death cum Retirement Gratuity, Commuted Pension, Leave Encashment, Retrenchment Compensation, Receipts at the time of Voluntary Retirement, Foreign Allowances and Perquisites, Receipts from Life Insurance Policy, House Rent Allowance.

Module-4: Income from Salary	14 Hours

Characteristics of salary income, meaning of salary for various purposes -allowances-perquisites and their valuation -tax free perquisites- Deductions under sec.16; Provident Fund – meaning &income tax provisions relating to Statutory Provident Fund, Recognized Provident Fund, Unrecognized Provident Fund, Superannuation Fund and Public Provident Fund; Computation of Income from Salary.

Module-5: Computation of Taxable Salary and Relevant Deductions U/s 80	12 Hours

Problems on Computation of Taxable Salary and Deductions u/s 80C, 80CCC, 80CCD, 80CCE; Provisions relating to Deduction of Tax at Source (TDS) from Salaries u/s 192.

Course Outcomes: At the end of the course the student will be able to:	
Understand	The structure of direct taxes in India
Comprehend	The income tax laws, procedures and regulations time to time.
Apply	The knowledge in calculation of tax liability and filing of returns

Reference Books:

Sl. No.	Title of the Book	Name of the Author/s	Name of the Publisher
1	**Direct Taxes,**	Dr. Vinod K Singhania,	Taxmann's Publications.
2	**Income Tax Law and Practice,**	Dr. H.C.Mehrotra and Dr. S.P.Goyal,	Sahithya Bhavan Publication.
3	**Students Hand Book on Taxation**	T.N. Manoharan	Snow White Publications.
4	**Practical Approach to Income Tax**	Dr. Girish Ahuja and Dr. Ravi Gupta	Commercial Law Publishers (India) Pvt. Ltd.
5	**Direct Tax - I**	Dr. Ravi M.N., Dr. Suman Shetty N and Bhanuprakash B.E.	Professional Books publishers

Program Name	**B.Com-Computer application**	Semester	**III**
Course Title	**Java Programming**		
Course Code:	**BCMCAVS301**	No.of Credits	**03**
Contact hours	**48 Hours**	Duration of Exam/SEE	**3hours**
Formative Assessment Marks	**20**	Summative Assessment Marks	**80**

Course Outcomes (COs):
At the end of the course, students will be able to:
- Understand the object-oriented concepts and JAVA Technology
- Present the Java Technology basics including classes, objects, sub-classes, etc.
- Implement Classes and multithreading using JAVA.
- Demonstrate the basic principles of creating Java applications with GUI.

Unit	Description	Hours
1	**Java Evolution:** Java history, Java features, Java support systems, Java environment. **Overview of Java Language:** Introduction, Java program structure, Java Tokens, Java Statements, Implementing a Java Program, Java Virtual Machine, Command line arguments. **Constants, Variables and Data Types:** Introduction, Constants, variables, data types, Declaration of variables, Scope of variables, Standard default values. **Operators:** Introduction, Arithmetic, Relational, Logical, Assignment, Increment & decrement, conditional, Bitwise operators, special operators, Precedence of operators **Expressions:** Arithmetic expressions, Evaluation of expressions, Type conversions in expressions, Operator precedence and associatively, **Mathematical functions.**	12
2	**Decision making and branching:** Introduction, Decision making with If statements, simple IF statement, Nesting of IF …….ELSE statements. ELSE…….if…….ladder, switch statement, ?: operator, **Decision making and Looping:** Introduction, while statement, Do statement, For statement, Jumps in Loops, Labeled Loops. **Classes objects and methods:** Introduction, Defining a Class, Adding Variables, Adding methods, Creating Objects, Accessing Class members, Constructors, Methods Overloading, Static Members, Nesting of Methods, Inheritance, Overriding Methods, Final variables and Methods, Final classes, Finalizer Methods, Abstract Methods and Classes, Visibility Control.	12

3	**Arrays:** One dimensional Arrays, Creating an Array, Two Dimensional Arrays, Strings, Vectors, Wrapper Classes. **Interfaces:** Defining Interfaces, Extending Interfaces, Implementing Interfaces, Accessing Interface Variables. **Packages:** Introduction, Java, API Packages, Using System Packages, Naming Conventions, Creating Packages, accessing a Package, using a Package, adding a class to a Package, Hiding classes. **Managing Errors and Exceptions:** Introduction, Types of Errors, Exceptions, Syntax of Exception Handling Code, Multiple Catch Statements, Using Finally Statement, throwing our own Exceptions, Using Exceptions for Debugging	12
4.	**Input/Output:** The Java I/O Classes and Interfaces, The Stream Classes, The Byte Streams, The Character Streams, Basics of File Programming: Reading from the file and Writing to the file. **Event Handling -** The delegation event model, Event Classes – ActionEvent, KeyEvent & MouseEvent Classes, EventListener Interfaces –ActionListener, KeyListener & MouseListener interfaces. Using the Delegation Event Model. Window Fundamentals, Working with Frame Windows, Creating a Frame Window in an Applet. Creating a Windowed Program, Displaying information within a window. **Introducing swing**–two key swing features, components and containers, the swing packages, a simple swing application, event handling. Exploring Swing- Jlabel, JTextField, JButton, Checkboxes, Radio buttons , Jlist , JComboBox.	12

Text Books:
1. Programming with Java, By E Balagurusamy – A Primer, 4 th Edition, McGraw Hill Publication.
2. Herbert Schildt, Java -The Complete Reference, Seventh Edition, McGrawHill Publication. 2017
3. Core Java Volume I – Fundamentals, By Cay S. Horstmann, Prentice Hall.
   Ref

References:
1. Object Oriented Programming with Java: Somashekara M.T., Guru, D.S., Manjunatha K.S, 1st Edition, PHI Learning 2017.
2. Java 2 - The Complete Reference, Herbert Schildt, 5th Edition, McGraw Hill Publication, 2017.

Pedagogy: Lecture/ PPT/ Videos/ Demonstration/ Concept mapping/ Case Studies examples/ Tutorial/Problem Solving/Trouble shooting.

Program Name	**B.Com-Computer applications**	Semester	**III**
Course Title	**Operating System**		
Course Code:	**BCMCAVS302**	No.of Credits	**02**
Contact hours	**30 Hours**	Duration of Exam/SEE	**2hours**
Formative Assessment Marks	**10**	Summative Assessment Marks	**40**

Course Outcomes (COs):
On successful completion of the course, the Students will be able to
a) Analyze the structure of OS and basic architectural components involved in design
 b) Analyze the various resource management techniques
c) Interpret the mechanisms adopted for file sharing
d) Conceptualize the components involved in designing a contemporary OS
e) To be familiar with various types of operating systems

Unit	Description	Hours
1	Introduction, What Operating Systems Do, Computer-System Organization, Computer-System Architecture, Resource Management. **Operating System Structures**-Operating-System Services, User and Operating-System Interface. **Process Management**-Processes, Process Concept, Process Scheduling	**10**
2	**Threads and Concurrency**-Overview, Multithreading Models **CPU Scheduling-**Basic Concepts, Scheduling Algorithm **Deadlocks**-Deadlock Characterization, Methods for handling deadlock, Deadlock Avoidance, Deadlock Detection, Recovery from Deadlock	**10**
3	**Linux:** An introduction, reason for its popularity, Linux files system, login and logout. **Linux commands:** Command format, Wild card characters **Directory oriented** commands – ls, mkdir, rmdir, cd, pwd **File oriented commands** – cat, cp,rm, mv, wc File Access Permissions , chmod command **Communication oriented commands** – write, mail, wall **General purpose commands** – date, who, who am i, man, cal, expr **Pipe and Filters related** commands - Redirection, pipe, sort, grep vi editor, Shell programming	**10**
Text Books: 1. Silberschartz, Galvin and Gagne, Operating Systems Concepts, 10th Edition, JohnWiley& sons, Pvt. Ltd.2008 2. B Mohamed Ibrahim, Linux: A Practical Approach, Laxmi Publications; First edition,		

2016

Pedagogy: Lecture/ PPT/ Videos/ Demonstration/ Concept mapping/ Case Studies examples/ Tutorial/Problem Solving/Trouble shooting.

Program Name	**B.C.A**	Semester	**III**
Course Title	**Cloud Computing (Compulsory)**		
Course Code:	**BCMCAVS303**	**No.of Credits**	**03**
Contact hours	**30 Hours**	**Duration of Exam/SEE**	**2 hours**
Formative Assessment Marks	**10**	Summative Assessment Marks	**40**

Course Outcomes (COs): After the successful completion of the course, the student will be able to:

- CO1 Explain the core concepts of the cloud computing paradigm such as how and why this paradigm shift came about, the characteristics, advantages and challenges brought about by the various models and services in cloud computing.
- CO2 Apply the fundamental concepts in data centres to understand the trade-offs in power, efficiency and cost.
- CO3 Identify resource management fundamentals like resource abstraction, sharing and sandboxing and outline their role in managing infrastructure in cloud computing.
- CO4 Analyze various cloud programming models and apply them to solve problems on the cloud.

Unit	Description	Hours
1	**Introduction:** Different Computing Paradigms- Parallel Computing, Distributed Computing, Cluster Computing, Grid Computing, Cloud Computing etc., Comparison of various Computing Technologies; Cloud Computing Basics- What is Cloud Computing? History, Characteristic Features, Advantages and Disadvantages, and Applications of Cloud Computing; Trends in Cloud Computing; Leading Cloud Platform Service Providers.	10
2	**Cloud Architecture:** Cloud Service Models- Infrastructure as a Service (IaaS), Platform as a Service (PaaS) and Software as a Service (SaaS), Comparison of different Service Models; Cloud Deployment Models- Public Cloud; Private Cloud, Hybrid Cloud, Community Cloud; Cloud Computing Architecture- Layered Architecture of Cloud. Virtualization- Definition, Features of Virtualization; Types of Virtualizations- Hardware Virtualization, Server Virtualization, Application Virtualization, Storage Virtualization, Operating System Virtualization; Virtualization and Cloud Computing, Pros and Cons of Virtualization, Technology Examples- Xen: Paravirtualization, VMware: Full Virtualization, Microsoft	10

	Hyper-V.	
3	**Cloud Application Programming and the Aneka Platform:** Aneka Cloud Application Platform- Framework Overview, Anatomy of the Aneka Container; Building Aneka Clouds (Infrastructure Organization, Logical Organization, Private Cloud Deployment Mode, Public Cloud Deployment Mode, Hybrid Cloud Deployment Mode); Cloud Programming and Management- Aneka SDK (Application Model and Service Model); Management Tools (Infrastructure, Platform and Application management).	10

Text Books:
1 Rajkumar Buyya, Christian Vecchiola, S. ThamaraiSelvi: "Mastering CloudComputing-Foundations and Applications Programming", Elsevier, 2013

References Books:
1. Rajkumar Buyya, Christian Vecchiola, S. ThamaraiSelvi: "Mastering CloudComputing- Foundations and Applications Programming", Elsevier, 2013
2. 2 Barrie Sosinsky: "Cloud Computing Bible", Wiley-India, 2010
3. K Chandrashekaran: "Essentials of Cloud Computing", CRC Press, 2015

4 Derrick Rountree, Ileana Castrillo: "The Basics of Cloud Computing", Elsevier, 2014

Pedagogy: Lecture/ PPT/ Videos/ Demonstration/ Concept mapping/ Case Studies examples/ Tutorial/Problem Solving/Trouble shooting.

Program Name	B.Com-Computer application	Semester	III
Course Title	Java Programming Lab		
Course Code:	BCMCAVPS301	No.of Credits	02
Contact hours	52 Hours per week	Duration of Exam/SEE	3 hours
Formative Assessment Marks	10	Summative Assessment Marks	40

PART-A: JAVA Programming Lab
1. Write a Java program to find whether the given number is palindrome or not.

2. Program to accept student name and marks in three subjects. Find the total marks, average and grade (depending on the average marks).
3. 2. Program, which reads two numbers having same number of digits. The program outputs the sum of product of corresponding digits.(Hint Input 327 and 539 output 3x5+2x3+7x9=84)
4. Write a program to initialize an integer array and find the maximum and minimum value of the array.

5. Create a class Box that uses a parameterized constructor to initialize the dimensions of a box. The dimensions of the Box are width, height, depth. The class should have a method that can return the volume of the box.

6. Given two strings, *a* and *b*, print a new string which is made of the following combination-first character of *a*, the first character of *b*, second character of *a*, second character of *b* and so on. Any characters left, will go to the end of the result.

   a. *Sample Example:*
      i. Input string: Hello,World
      ii. Output string: HWeolrllod

PART-B

1) Create a school application with a class called Person. Create name and D ate of Birth as member variables. Create a class called Teacher that inherits from the Person class. The teacher will have additional properties like salary, and the subject that the teacher teaches. Create a class called Student that inherits from Person class. This class will have a member variable called student-Id. Create a class called College Student that inherits from Student class. This class will have college Name, the year in which the student is studying (first/second/third/fourth) etc.Create objects of each of this classes, invoke and test the methods that are available in these classes.
2) Write a Menu drive Java program to perform following operation using Vector.
   a. INSERT an ITEM
   b. DELETE a SPECFIC ITEM
   c. DISPLAY SPECFIC ITEM
   d. DISPLAY ALL ITEMS

3) Write a Java program to read number form NUMBER.txt file and count the number of zero's, positive and negative numbers and display the result.
4) Write a Program to create an abstract class named shape that contains two integers and an empty method named print Area(). Provide three classes named Rectangle, Triangle and Ellipse such that each one of the classes extends the class shape. Each one of the class contains only the method print Area() that print the area of the given shape.[Abstract class].

5) Create a package to convert temperature in centigrade into Fahrenheit, and one more package to calculate the simple Interest. Implement both package in the Main () by accepting the required inputs for each application

6)   Write a program that creates a user interface to perform basic integer operations. The user enters two numbers in the textfields, Num1 and Num2. The result of operations must be displayed in the Result textfield when the "=" button is clicked. If Num1 or Num2 is not an integer, the program should throw NumberFormatException. If Num2 is Zero, the program should throw an ArithmeticException when division operation is applied. Display the exception in a message dialog box. **[Swing]**

Evaluation Scheme for Lab Examination:

Assessment Criteria		
Program-1	PART-A Writing:5 Marks Execution:5Marks	15Marks
Program-2	PART-B Writing:5 Marks Execution:5Marks	20Marks
Practical Record		05 Marks
Total		40Marks

Curriculum for IV Semester B.Com (Voc) (Computer Application)

CORPORATE ACCOUNTING-II			
Course Code	**B.Com-CAT-4.1**	IA Marks	**20**
Course Type (Theory/Practical/Integrated)	Theory	End Sem Marks	**80**
		Total Marks	**100**
Teaching Hours/Week	**5hrs**		
Total Hours	**60hrs**	Credits	**05**

Course Learning Objectives: Upon successful completion of the course, students will be able to
- ✓ Comprehend the legal regulations and procedures for the redemption of preference shares.
- ✓ Understand the various techniques of mergers and acquisitions involving joint stock corporations.
- ✓ Comprehend the procedure of internal reconstruction.
- ✓ Comprehend the implications and conditions of liquidation, and formulate the liquidator's conclusive financial statement.
- ✓ Acquire understanding of contemporary advancements in accounting and accounting norms.

Module-1	REDEMPTION OF PREFERENCE SHARES	12 Hours

Definitions and Legal Regulations, Treatment of Premium on Redemption. Establishment of Capital Redemption Reserve Account for New Share Issuance for Redemption. Organising Cash Reserves for Redemption, Establishment of the Minimum Quantity of Shares Required for Redemption. Issuance of Bonus Shares, Preparation of Balance Sheet in accordance with Schedule III of the Companies Act, 2013 post-Redemption

Module-2	MERGERS AND ACQUISITION OF JOINT STOCK COMPANIES	16 Hours

Amalgamation and Acquisition of Companies: Definition of Amalgamation and Acquisition, Categories of Amalgamation, Amalgamation as a Merger, Amalgamation as a Purchase. **Calculation of Purchase Consideration:**Lump Sum Method, Net Asset Method, Net Payment Method. **Accounting for Amalgamation**: Pooling of Interests Method (including issues), Purchase Method (including issues). **Accounting Procedures**: Journal Entries and Ledger Accounts in the Transferor Company's Records, Journal Entries in the Transferee Company's Records, Preparation of Balance Sheet Post-Merger (in accordance with Schedule III of the Companies Act, 2013).

Module-3	INTERNAL RECONSTRUCTION OF JOINT STOCK COMPANIES	10 Hours

Internal Reconstruction and Capital Reduction: Definition of Capital Reduction, Aims of Capital Reduction, Regulations for Share Capital Reduction under the Companies Act, 2013. Methods of Capital Reduction. **Journal Entries for Capital Reduction**: Accounting for Capital Reduction. Preparation of the Capital Reduction Account and the Balance Sheet post-reduction in accordance with Schedule III of the Companies Act, 2013.

Module-4	LIQUIDATION OF COMPANIES	12 Hours

Liquidation of Companies: Definition of Liquidation, Methods of Winding Up, Compulsory Winding Up, Voluntary Winding Up, Winding Up under Judicial Supervision. **Essential Elements of Liquidation**: Payment Hierarchy during Liquidation, Liquidator's Financial Statement, Liquidator's Compensation. **Practical Application**: Issues Regarding the Preparation

of the Liquidator's Statement of Account.

Module-5 RECENT DEVELOPMENTS IN ACCOUNTING AND ACCOUNTING STANDARDS	10 Hours
Recent Advancements in Accounting and Accounting Standards: Global Reporting Initiative (GRI) concepts: General disclosure of ESG factors.**Inflation Accounting**: Introduction, meaning, objectives and applications	

Books for Reference
- ✓ Arulanandam& Raman - Corporate Accounting-II, HPH
- ✓ Anil Kumar.S Rajesh Kumar.V and Mariyappa B Advanced Corporate Accounting, HPH
- ✓ Dr. Venkataraman. R – Advanced Corporate Accounting
- ✓ S.N. Maheswari , Financial Accounting, Vikas publishing
- ✓ Soundarajan A & K. Venkataramana, Advanced Corporate Accounting, SHBP
- ✓ RL Gupta, Advanced Accountancy, Sultan Chand
- ✓ K.K Verma – Corporate Accounting.
- ✓ Jain and Narang, Corporate Accounting.
- ✓ Tulsian, Advanced Accounting
- ✓ Shukla and Grewal – Advanced Accountancy, Sultan Chand

INCOME TAX - II			
Course Code	**B.Com-CAT-4.2**	IA Marks	10
Course Type (Theory/Practical/Integrated)	Theory	End Sem Marks	40
		Total Marks	50
Teaching Hours/Week	2 Hours		3 Hours
Total Hours	24 Hours	Credits	2

Course Learning Objectives: The objective of the course is to
- To familiarize the students with the Legal Provisions and Procedural aspects of Income Tax.
- To equip the students with a comprehensive understanding of direct taxes, their applications, and the tax laws governing them.
- To be taught with reference to the relevant amendments made to Direct Tax Laws of India by Finance Acts passed in the Parliament from time to time.
- Apply the knowledge of taxation in practical field.

Module - 1: Depreciation	**08 Hours**
Rules governing Depreciation – Additional Depreciation - Computation of Depreciation and Written Down Value under Block of Assets Method.	

Module-2: Profit and Gain from Business and Profession	**10 Hours**
Deduction Permissible u/s 30 to 37, Payments not Deductible - Computation of Business Income	

Module-3: Computation of Professional Income	**06 Hours**

Computation of Professional Income

Course Outcomes: At the end of the course the student will be able to:	
Understand	The structure of direct taxes in India
Comprehend	The income tax laws, procedures and regulations time to time.
Apply	The knowledge in calculation of tax liability and filing of returns

Books for Reference

Sl. No.	Title of the Book	Name of the Author/s	Name of the Publisher
1	Direct Taxes,	Dr. Vinod K Singhania,	Taxmann's Publications.
2	Income Tax Law and Practice,	Dr. H.C.Mehrotra and Dr. S.P.Goyal,	Sahithya Bhavan Publication.
3	Students Hand Book on Taxation	T.N. Manoharan	Snow White Publications.
4	Practical Approach to Income Tax	Dr. Girish Ahuja and Dr. Ravi Gupta	Commercial Law Publishers (India) Pvt. Ltd.
5	Direct Tax - II	Dr. Ravi M.N., Dr. Suman Shetty N and Bhanuprakash B.E.	Professional Books publishers

INCOME TAX - III			
Course Code	**B.Com-CAT-4.2**	IA Marks	10
Course Type (Theory/Practical/Integrated)	Theory	End Sem Marks	40
		Total Marks	50
Teaching Hours/Week	2 Hours		3 Hours
Total Hours	24 Hours	Credits	2

Course Learning Objectives: The objective of the course is to
- To familiarize the students with the Legal Provisions and Procedural aspects of Income Tax.
- To equip the students with a comprehensive understanding of direct taxes, their applications, and the tax laws governing them.
- To be taught with reference to the relevant amendments made to Direct Tax Laws of India by Finance Acts passed in the Parliament from time to time.
- Apply the knowledge of taxation in practical field.

Module - 1: Income from House Property	**12 Hours**

Composite Rent, Annual Value of let out property- self occupied property-concept of Unrealized Rent and Arrears of Rent and its treatment-recovery of arrears of rent, deductions from Annual Value.

Module-2: Capital Gains	06 Hours
Meaning –Transfer, Transactions not regarded as Transfer- Short Term and Long Term Capital Gains -Cost of Acquisition – Capital Gains Exempt u/s 54 –Problems on Computation of Taxable Capital Gains.	
Module-3: Income from Other Sources	**06 Hours**
Interest on securities-Grossing up – Other Important Exemptions u/s10 including section 10(15) - Deductions u/s 57.	

Course Outcomes: At the end of the course the student will be able to:	
Understand	The structure of direct taxes in India
Comprehend	The income tax laws, procedures and regulations time to time.
Apply	The knowledge in calculation of tax liability and filing of returns

Books for Reference

Sl. No.	Title of the Book	Name of the Author/s	Name of the Publisher
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2	**Income Tax Law and Practice,**	Dr. H.C.Mehrotra and Dr. S.P.Goyal,	Sahithya Bhavan Publication.
3	**Students Hand Book on Taxation**	T.N. Manoharan	Snow White Publications.
4	**Practical Approach to Income Tax**	Dr. Girish Ahuja and Dr. Ravi Gupta	Commercial Law Publishers (India) Pvt. Ltd.
5	**Direct Tax - II**	Dr. Ravi M.N., Dr. Suman Shetty N and Bhanuprakash B.E.	Professional Books publishers

Semester: IV

Program Name	B.Com-Computer application	Semester	IV
Course Title	Web Application Development		
Course Code:	BCMCAVS401	No.of Credits	03
Contact hours	48 Hours per week	Duration of Exam/SEE	3 hours
Formative Assessment Marks	20	Summative Assessment Marks	80

Web Application Development

Course Contents:

Unit	Description	Hours
1	Internet Basics,Hyper Text Markup Language-Formatting tags-Creating Web Page Links-Listing Text On Your Page – Tables in HTML- Frames in HTML – Brightning Your Page With Animated Text And Images –HTML5 Web Forms-Building forms in HTML5-Drawing with the Canvas Element-Cascading Style sheet - Style sheet basic – Applying CSS to HTML document – Understanding Css Transitions–Enriching Forms Using CSS3 Properties-Transforming The Message	12
2	Introduction to JavaScript – Advantages of JavaScript – JavaScript syntax-data type – Variable-Array – operator & expression – looping constructor – Function – Dialog Box	12
3	JavaScript document object model – Introduction – object in HTML – Event Handling – Window Object – Document Object – Browser Object – Form Object – Navigator Object Screen Object – Build In Object – User Defined Object, Cookies.	12
4.	. ASP. NET Language Structure – Introduction To Visual Studio 2012 IDE –understanding ASP.NET 4.5 Directives. Basic Web server Controls- Label, Textbox, Button, Image, Link Button Check & Radio button, Hyperlink. Data List Web Server Controls - Check box list, Radio button list, Drop down list, List box. Validation controls.	12

Text Book:
1) Javascript, A Beginner's Guide 3rd edition, by John Pollock, Published by McGraw-Hill Professional Publishing
2) ASP .NET 4.0(covers c# and vb 2010codes), Black book by Kogent and Dreamtech PRESS Publication, Edittion -2013

Reference Books:
1) Ivan Bayross, HTML5 and CSS3 made Simple, BPB publications.
2) Javascript:The Definitive Guide, 6th edition By David Flanagan – Published by O'Reilly Media, Inc.
3.

Pedagogy: Lecture/ PPT/ Videos/ Demonstration/ Concept mapping/ Case Studies examples/ Tutorial/Problem Solving/Trouble shooting.

Semester: IV

Program Name	B.Com-Computer application	Semester	IV
Course Title	Computerized Accounting		
Course Code:	**BCMCAVPS402**	No.of Credits	03
Contact hours	48 Hours per week	Duration of Exam/SEE	3 hours
Formative Assessment Marks	20	Summative Assessment Marks	80

B.Com 4.3:Computerized Accounting

Unit	Description	Hours
1	**Excel: Working with Data**: Working with Data in a Worksheet, Wrapping Text, Modifying Data of a worksheet, Copying a Worksheet, Working with Number formatting, Exploring Charts, Working with sparklines, Working with Conditional Formatting, Exploring Sort and Filter Features, Filtering Table Data Using Slicer **Working with Formulas and Functions:** Understanding formulas, Exploring cell referencing, Defining the Basic concepts defined in a	12

	Function, Using Mathematical and statistical Functions, Working with logical functions, Working with LookUp and Reference, Working with Auditing Tools **Working with Data Analysis Tools and Data Protection:** Working with a Pivot Table Working with Google Sheets: **Features of Google Sheet, Creating Google Sheet, Importing and Exporting data in Google Sheet, Putting Comments on a Google Sheet, Sharing a Google Sheet.**	
2	**Computerized Accounting:** Exploring Computerized Accounting **Tally. ERP 9 and Elemental Features:** Introduction, opening the Tally ERP 9 Application, Understanding the components of the Tally ERP 9 Application Window, Mouse and Keyboard Convections, Managing the screen Area, Closing the Tally.ERP 9 Application, Creating a company in Tally ERP9, Selecting a company, Shutting a company, Altering Company Details, Company Features, Configuring Tally **Creating Masters in Tally ERP9:** Introduction, Creating Accounting Masters in Tally ERP9-Groups, Ledgers. **Working With Vouchers:** Introduction, Creating Voucher Type, Accounting Vouchers	12
3	Creating Inventory Masters in Tally ERP9-Stock Groups, Stock Categories, Godowns, Units of Measure, Stock Items. Inventory Vouchers, Order Processing, Optional and Non-Accounting Vouchers **Reports in Tally:** Introduction, Financial statements, Day Book, Accounting Books and Registers, Inventory Books and Registers, Statements of Accounts, Statements of Inventory, Management Information System Reports.	12
4.	**Goods and Service Tax:** Introduction, Features of GST, Benefits of GST, Classification of GST, Enabling GST in Tally.ERP 9, Creating Masters for GST, Creating vouchers for GST, Viewing the GST Rates. **Data Handling in Tally :**Introduction , Taking the backup of data in tally, Restoring data , exporting data ,password policy **Tax Deducted at source (TDS)**: Introduction , Basic terminology of TDS , Enabling TDS , Creating ledgers , Creating TDS Vouchers, TDS reports	12

Text Book:
1. Comdex, Tally.ERP9 course kit with GST &MS Excel- Vikas Gupta, Dreamtech Press.

Reference Books:
1. Parag Joshi, Tally.ERP 9 with GST with Solved Problems, Dnyansankool Prakashan; 1st edition, 2017.

2. .Asok K. Nadhan, Tally ERP 9 Training Guide, BPB Publications; Fourth edition, 2018.
3. Rajesh Chheda, Learn Tally.ERP 9 with GST and E-Way Bill, Ane Books; 3 edition, 2018.
4. Yogesh Patel, Free Accounting with Free Software, Skylark Publications (UK); First edition, 2011
5. Student Guide-40571A Micrsoft Excel expert 2019
6. SIA Experts, Computerized Accounting, SIA Publishers & Distributors Pvt Ltd, 2018
7. Yadagiri M., Srinivas G., Computerized Accounting, Jain Book Agency, 1st edition, 2008
8. Francis Princy, Computerized Accounting Tally-9 , Kalyani Publications, 2014
9. Tally Education Pvt Ltd, GST Using Tally.ERP 9 Release 6.1, Sahaj Enterprises; 1 Edition, 2017.
4.

Pedagogy: Lecture/ PPT/ Videos/ Demonstration/ Concept mapping/ Case Studies examples/ Tutorial/Problem Solving/Trouble shooting.

Program Name	B.Com-Computer application	Semester	IV
Course Title	Web Application Lab		
Course Code:	BCMCAVPS401	No.of Credits	02
Contact hours	52 Hours per week	Duration of Exam/SEE	3 hours
Formative Assessment Marks	10	Summative Assessment Marks	40

PART-A

1. Write a HTML program for any 10 different Tags.

2. Write a HTML program for create small website.

3. Write a HTML program for time-table using tables

Timetable of IV SEMESTER BOCM

DAY	I	II	III	IV		V	VI	VII
MON	TALLY	SAT	ENG	LANG	L U N C H B R E A K	WT	ACC	IT
TUE	ENG	TALLY	TALLY Lab			LANG	STAT	WT
WED	ACC	ENG	LANG	AI		EC/CC		
THU	AI	STAT	TALLY	WT		WT Lab		
FRI	LANG	ACC	TALLY	WT		EXCEL Lab		
SAT	ENG	LANG	IC	TALLY		HOLIDAY		

4. Write a HTML program to develop a static Registration Form

Registration Form

First Name
Last Name
UserName
Password
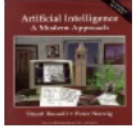Confirm Password

Address
Date of Birth dd -- ∨ mm -- ∨ yyyy ---- ∨
Sex   ○ Male ○ Female
Martial Status   ○ Single ○ Married
Mobile Number
COURSE ○ CSE ○ BA ○ BCOM ○ BSC ○ BBA ○ BCA
Languages Known   □ English □ Hindi □ Kannada

[SUBMIT] [CANCEL]

5. Write a HTML program to develop a static Web Page for Catalog.

	Book:XML Bible Author:Wingston Publication:wiely	$40.5	add to cart
	Book:A1 Author:S.Rusell Publication:Princeton hall	$63	add to cart
	Book:JAVA 2 Author:Watson Publication:BPB	$35.5	add to cart
	Book:Html in 24 hrs Author:Sam Peter Publication:SAM	$50	add to cart

1. Develop a HTML5 document to create a 'No Parking' sign as shown below. (use canvas element)

2. Write a JavaScript program to validate USER LOGIN page.
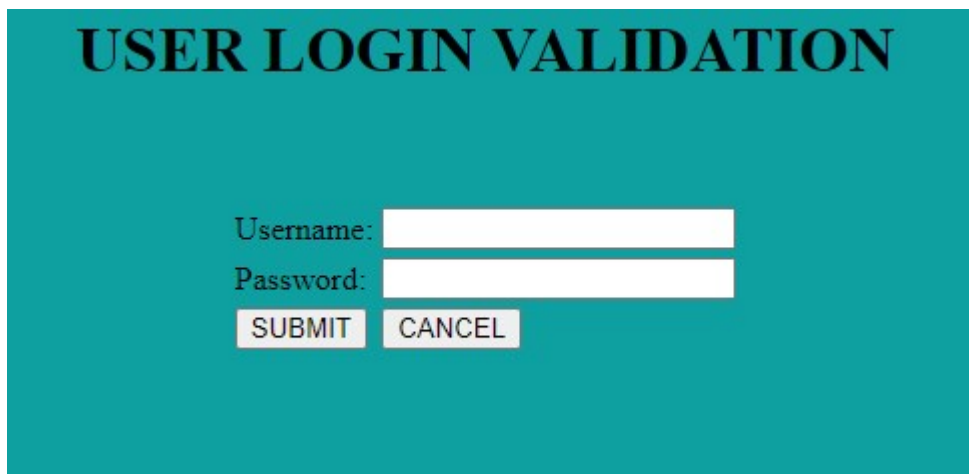
3. Write a JavaScript to design a simple calculator to perform the following operations: sum, product, difference and quotient.

HTML File (1.html)

```
[                    ]
[ 0 ][ 1 ][ 2 ][ + ]
[ 3 ][ 4 ][ 5 ][ - ]
[ 6 ][ 7 ][ 8 ][ * ]
[ 9 ][+/-][ = ][ / ]
[ Clear ]
```

4. Develop and demonstrate a HTML file that includes JavaScript script that uses functions for the following problems:

a. Input: A string
   Output: The position in the string of the left-most vowel
b. Input: A number
   Output: The number with its digits in the reverse order

Finding left most vowel

Enter a string: [   ]

[Find]

Reverse of a number

Enter a number: [   ]

[Reverse]

5. Write a JavaScript that calculates the squares and cubes of the numbers from 0 to 10 and outputs HTML text that displays the resulting values in an HTML table format.

Number	Square	Cube
1	1	1
2	4	8
3	9	27
4	16	64
5	25	125
6	36	216
7	49	343
8	64	512
9	81	729
10	100	1000

6. Write a JavaScript that calculates the Addition of two Matrixes displays the resulting values in an HTML table format.

Evaluation Scheme for Lab Examination:

Assessment Criteria		
Program-1	PART-A Writing:5 Marks Execution:5Marks	15Marks
Program-2	PART-B Writing:5 Marks Execution:5Marks	20Marks
Practical Record		05 Marks
Total		40Marks

Program Name	B.Com-Computer application	Semester	IV
Course Title	Computerized Accounting Lab		
Course Code:	BCMCAVPS402	No.of Credits	02
Contact hours	52 Hours per week	Duration of SEA/Exam	3 hours
Formative Assessment Marks	10	Summative Assessment Marks	40

PART-A

1. **Create a worksheet with sl.no. Name of the salesman, Item, no. of items sold, rate per unit, total amount.**

    a) Find the total number of items sold.

    b) Round the total sales to 1 digit.

    c) Find the sum of sales of item equal to book.

    d) Count the sales if item equal to soap.

    e) Concatenate name with total amount.

2. **Create a student worksheet with the following format: (Use data validation while entering marks).**

Student Name	Arjun	Bhuvan	Deepa	Ranjan	Vindhya
Kannada	68	54	65	43	87
English	90	68	76	86	98
Science	87	67	56	76	56
Maths	65	65	65	87	98
Social	87	98	87	86	76
Hindi/Sanskrit	76	65	54	43	65

    a) Create a drop down list for Student Name in separate cell. Using Hlookup function retrieve the mark of Bhuvan in Science.

    b) Fetch the marks in all subjects of Deepa.

    c) Use VLookup function to obtain the maths mark of Vindhya.

    d) Calculate total marks. Retrieve the total mark of the student who obtained maximum total marks.

e) Draw a chart to display top three students and their marks

3. Create a worksheet with fields Country, Resort Name, No of days, TravelMethod (PLANE,TRAIn,BUS….) and Price. Insert at least 10 records. Create a pivot table from this data, then use the filters within to view the average prices ofholidays that have a Travel Method of Plane and a Resort Name that begins with the letter S.

4. Create a worksheet to enter Employee details like Employee Id, Name,Designation, Phone no., address, email_id, salary, DA, HRA, PF, Gross Salary, net salary.
   a. Find the gross AND net salary of the employees.

   b. Use Lookup function to Retrieve Employee address of the employee selected from the list.

   c. Use Scenario Manager to find net salary of an employee with different salaries.

   d. Use goal seek to find salary if the net salary is 40,000

5. Create a WORKSHEET WITH FIELDS

First name	Last name	Hobby	City	Weight (KG)
Ben	Hill	Reading	Leicester	84

Insert 10 records
Using the "Data" tab, perform the following filtering:
1. Filter for people who's hobbies are: Chess, Football, Karate, Reading or Tennis
2. Find people who live in London and have the hobby of Bird Watching
3. Find people who either have the first name Guy or weigh 70 KG.

4. Filter for people with a first name that contains B , followed by a single letter, followed by N.
5. Filter for people whose Last Name starts with J, followed by 0 or more characters, followed by the letter S

PART-B

6.Record the following vouchers in Tally and generate Balance sheet.

July 1 2020	Ram commenced business with cash 10,000
July 30 2020	Paid to bank, 8000
August 1 2020	Bought goods for cash 500
August 1 2020	Bought Office furniture 400
August 1 2020	Drew from bank for office 1000
August 30 2020	Goods sold to Shyam 2600
August 30 2020	Bought goods from Kishan 410
Sep 1 2020	Trade expenses paid 100
Sep 1 2020	Received cash from Shyam 600
Sep 30 2020	Wages paid 50
Oct 1 2020	Kishan paid off in full settlement of hisaccount 410
Oct 1 2020	Rent paid 100
Oct 30 2020	Interest due on capital 500

7.Record the following transactions for Ram Home Needs for the year 2014-15

Jun 1	Ramu commenced business with cash Rs.20000
Jun2	He bought goods for cash. Rs. 10000
Jul 31	Bought furniture Rs. 2000
Aug 1	Deposited into bank Rs. 5000
Sep 1	Sold goods in cash Rs. 18000
Oct 31	Withdrawn cash for personal use Rs.500
Nov 1	Paid commission Rs.200
Dec 1	Paid rent Rs.200
Dec 31	Paid salaries Rs.200

Export the balance sheet into excel worksheet.

8.Journalize the following

On 1-7-2020 Mr. Naresh started business with cash Rs.50,000
Stock in hand:

Item	Quantity	Rate per
Pen	3000	8
Pencil	2500	5
Eraser	1200	4
Sharpener	3000	2
Crayon	200	10

- On 1-7-2007 purchased 1500 Pens @Rs.8 each, 750 Pencils @Rs. 5 each, 1000 Eraser @Rs. 4 each from J.J.Stores

- On 1-7-2007 sold 200 Pens @ Rs.10 each, 300 Pencils @Rs.6 Each, 400 Eraser @6 Rs. Each for cash.

- On 2-7-2007 sold 1100 Pens @Rs. 12 each, 400 Pencils @Rs.7 each, 500 eraser @ Rs.6.50 each for cash

- On 2-7-2007 opened an SB Account in Syndicate Bank by depositing Rs. 65000

1

9.Create a company and pass necessary entries.

- On 1st Dec 2020 cash paid for conveyance Rs.10000 to marketing, sales and admin department in t he ratio 4:4:2. Pass the necessary entry using cost center and category.

- On 2nd Dec 2020 cash paid for projected purchase of raw material worth Rs. 28000 from Rahul enterprise bill no-212 (Gross value Rs.25000 and gst@12% Rs.3000). Pass the necessary entry using cost center and category.

- On 2nd Dec 2020 raise an invoice for Rs.47200(gross value Rs.40000+gst @18% Rs. 7200) to Jugal Technologies towards sales of finish goods (INVOICE No- TI/01/2020-21). Pass the necessary entry using cost center and category (project sales).

Note: Detail of debtor and creditors:

Name	GST No	Address
Rahul Enterprises	07DTQPK8687M1ZF	PLOT NO 1 BAWANA INDUSTRIAL AREA DELHI
Jugal Technologies	07GZGPS0194J1ZU	KARAWALNAGAR,DELHI-119044

Pass necessary entries for the following under GST.

- ABC Pvt. Ltd. Sales one mobile phone on of gross value of mobile phone is Rs.15000/- and charge GST @12% (Rs.1800) total value Rs.16800 invoice no-01/T/20-21 to Mr.X in Delhi as Local Sales. Make sales invoice.

- ABC Pvt. Ltd. Sales two same mobile phone of gross value Rs.10,000 each and charge IGST@12% invoice no-02/20-21/TI to Mr.Y. He lives in Uttar Pradesh pass the necessary entry.

- On 1st July 2020 Mobile solutions ltd. Sales 5 mobile phone costing Rs.6000 each and Charge GST @12% on cost (invoice no-06/TI/2020) to ABC Pvt. Ltd. Mobile Solution Established in Delhi. Pass the necessary entry

- XYZ Ltd.(Uttar Pradesh) Sales 4 Mobile phones on 1st july 2017 costing Rs.7000 each charge IGST @12% (invoice no-03/TI/20-21) to ABC. Pvt. Ltd. Make purchase entry.

Evaluation Scheme for Lab Examination:

Assessment Criteria		
Program-1	PART-A Writing:5 Marks Execution:5Marks	15Marks
Program-2	PART-B Writing:5 Marks Execution:5Marks	20Marks
Practical Record		05 Marks
Total		40Marks

Question Paper Pattern for 50 Marks Papers
Internal Exams

Time: 1 Hours   Total Marks: 20

Section A
Answer any two of the following   2*2 =4

1. XXXX
2. XXXX
3. XXXX
4. XXXX

Section B
Answer any two of the following   4* 2 = 8

5. XXXX
6. XXXX
7. XXXX
8. XXXX

Section C
Answer any one of the following   8*1= 8

9. XXXX
10. XXXX

✶✶✶✶✶

Question Paper Pattern for 50 Marks Papers
<u>Semester End Exams</u>

Time: 2 Hours   Total Marks: 40

Section A
Answer any four of the following   **2*4 =8**

11.   XXXX
12.   XXXX
13.   XXXX
14.   XXXX
15.   XXXX
16.   XXXX

Section B
Answer any four of the following   **4* 4 = 16**

17.   XXXX
18.   XXXX
19.   XXXX
20.   XXXX
21.   XXXX
22.   XXXX

Section C
Answer any two of the following   **8*2 = 16**

23.   XXXX
24.   XXXX
25.   XXXX
26.   XXXX

*****