

DR. BABASAHEB AMBEDKAR MARATHWADA UNIVERSITY**CIRCULAR NO.SU/Commerce & Management/ V Sem./00/2020**

It is hereby inform to all concerned that, on the recommendation of the Dean, Faculty of Commerce & Management, the Hon'ble Vice-Chancellor in his emergency powers under section-12(7) of the Maharashtra Public Universities Act, 2016 has accepted the syllabi of **B.Com., BBA & BCA V Sem. & MPM I Sem.** under Choice Based Credit and Grading System on behalf of the Academic Council to be applied from the Academic Year 2020-2021 and onwards. The said syllabi are also available on bamu.ac.in on University website.

All concerned are requested to note the contents of this circular and bring notice to the students, teachers and staff for their information and necessary action.

University Campus,
Aurangabad-431 004.

REF.NO. SU/ COMMERCE/2020-21/

13429-38*

Date:- 20-07-2020.

*

[Signature]
Deputy Registrar,
Syllabus Section.

Copy forwarded with compliments to :-

- 1] **The Principals, affiliated concerned Colleges, Dr. Babasaheb Ambedkar Marathwada University.**
- 2] **The Director, University Network & Information Centre, UNIC, with a request to upload this Circular along with the said syllabi on University Website.**

Copy to :-

- 1] The Director, Board of Examination & Evaluation,
- 2] **The Section Officer, [B.Com. Unit] Examination Branch,**
- 3] **The Programmer [Computer Unit-1] Examinations,**
- 4] **The Programmer [Computer Unit-2] Examinations,**
- 5] The In-charge, [E-Suvidha Kendra], Rajarshi Shahu Maharaj Pariksha Bhavan, Dr. Babasaheb Ambedkar Marathwada University.
- 6] The Public Relation Officer,
- 7] The Record Keeper.

**DR. BABASAHEB AMBEDKAR
MARATHWADA UNIVERSITY,
AURANGABAD.**



Curriculum of
BACHELOR OF COMPUTER APPLICATION
(BCA)
IIIIRD YEAR
FIFTH SEMESTER
under Choice Based Credit & Grading System

[Effective from the Academic Year 2020-21 & onwards]


DR. BABASAHEB AMBEDKAR MARATHWADA UNIVERSITY, AURANGABAD.


FACULTY OF COMMERCE & MANAGEMENT


Syllabus - Bachelor of Computer Application (BCA)


Choice Based Credit System (CBCS)

Semester & Credits	Core Course [04]	Ability Enhancement Compulsory Courses [AEC] [01]	Discipline Specific Elective [DSE] [01]
V Credit 24	1. Management Accounting 2. SQL 2017 3. VB 4. Organizational Behavior	1. Software Engineering	Elective Paper [Any One] 1. Banking & Insurance OR 2. Retail Management
Total Credits 24	No. of Credits : 16	No. of Credits : 04	No. of Credits : 04


07/07/2020
Prof. W.K. Sarwade
(Dean + BOS Chairman)


07/07/2020
Prof. Syed Azharuddin
(Chairman BOS)

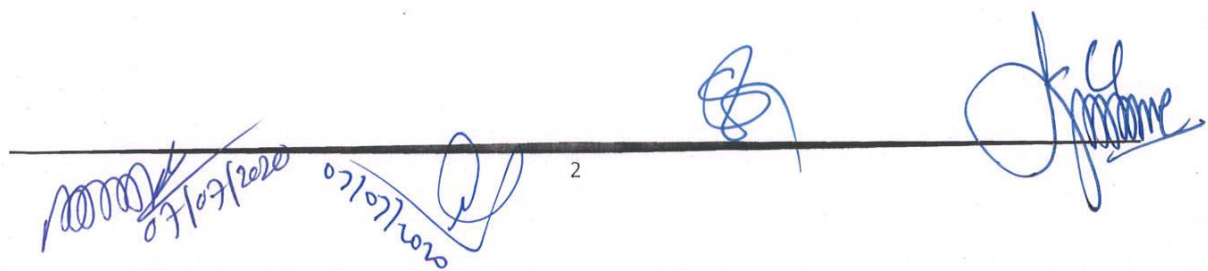

Prof. Satyaprem Ghumre
(Chairman BOS)


Dr. Kishor Salve
(Chairman BOS)

Structure of B. C. A. Fifth Semester

Choice Based Credit Grading System (CBCS) 2020 - 21

Paper Number	Subject/ Title of the Paper	Course	Weekly		Credits		IA	UA	Total Marks	Duration of Theory Exam
			Th	Pr	Th	Pr				
XXV	Management Accounting	Core Course	4	-	4	-	20	80	100	3 Hrs
XXVI	SQL 2017	Core Course	4	-	4	-	20	80	100	3 Hrs
XXVII	VB	Core Course	4	-	4	-	20	80	100	3 Hrs
XXVIII	Organizational Behavior	Core Course	4	-	4	-	20	80	100	3 Hrs
XXIX	Software Engineering	Ability Enhancement Compulsory	4	-	4	-	20	80	100	3 Hrs
XXX	1.Banking & Insurance OR 2.Retail Management	Discipline Specific Elective [Any One]	4	-	4	-	20	80	100	3 Hrs
	Total		24	-	24	-	120	480	600	--



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B.C.A. Vth Semester Syllabus (CBCS)
Paper No. XXV – Management Accounting

Theory – 80 Marks
Sessional – 20 Marks

	No. of Lectures
Unit I	10
Unit II	08
Unit III	14
Unit IV	14
Unit V	14
<p>Introduction to Management Accounting: Meaning, Definition, Features, Scope, Importance and Functions of Management Account. Differences between Management Accounting, Financial Accounting and Cost Accounting. Advantages and Limitations of Management Account. (Theory only)</p> <p>Analysis and Interpretation of Financial Statements: Meaning, Definition, Objectives, Scope of Financial Statements. Financial Statement Analysis, Tools of Financial Statements Analysis - Comparative financial statement, Common size financial statement, Trend Analysis. (Theory only)</p> <p>Ratio Analysis: Meaning, Advantages, Limitations, and Classification of ratios. Gross Profit Ratio, Net Profit Ratio, Return on Capital Employed Ratio, Inventory Turnover Ratio, Debtors & Credit Turnover Ratio, Current Ratio, Liquid Ratio, Proprietary Ratio. (Numeric only)</p> <p>Fund Flow Statement: Meaning, Uses, Limitations, Sources and uses of funds. Funds from operations, Statement showing changes in working capital, Funds Flow Statement (Only in statement form), Preparation of necessary ledger accounts. (Numeric only)</p> <p>Cash Flow Statement Cash Flow Statement as per revised accounting standard -3 in Statement Form (Numeric only)</p> <p>Practical: 20 Marks (to be conducted by the department in each college as per convenience) Sessional Work: 20 Marks (Based on Unit II, III and IV)</p> <p>1. To Collect the Financial Statements of Companies published in News Papers (05 Companies). 2. Calculate Profitability and Financial Ratios (One case). 3. Prepare Statement of Changes in Working Capital and Funds Flow Statement (One Case) i. 10 Marks for above mentioned work. ii. 10 Marks for Group Discussion and Seminar</p> <p>Reference Books :</p> <p>1. Dr. S.N. Maheshwari – Principles of Management Accounting, Sultan Chand & Sons, Delhi 2. Prof. A.P. Rao – Management Accounting – Everest Publishing House, New Delhi 3. Khan M.Y. & Jain P.K. - Management Accounting Tata McGraw-Hill Education 4. Dr. Jitendra Ahirrao - Management Accounting – Kailas Publications Aurangabad. 5. Dr. V.R. Nagori & Dr. Sanjay Agrawal - Management Accounting – Chinmay Publications Aurangabad.</p>	

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B.C.A. Vth Semester Syllabus (CBCS)
Paper No. XXVI – SQL 2017

Total marks – 100

Theory – 80 Marks

Sessional – 20 Marks

		No. of Lectures
Unit I	Introduction To DBMS: Database Management System (DBMS) and Data Models. Introduction to Basic Database, Advantages of DBMS, Exploring Relational DBMS, Understanding Client and Server, Introduction to TSQL (Transact-Structured Query Language), History and Features of TSQL, Types Of TSQL Commands	12
Unit II	Introduction to SQL Server: Advantages and Drawbacks of SQL Server, Comparison between SQL Server and Oracle, Installation steps of Server, Connecting to Server, Server Type, Server Name, Authentication Modes, SQL Server Authentication Mode, Windows Authentication Mode, Login and Password, SQL Server Management Studio and Tools in Management Studio, Object Explorer, Object Explorer Details, Query Editor	12
Unit III	Transaction Management: Transaction Concepts, Begin Transaction, Commit Transaction, Rollback Transaction, Save Transaction, Role of Log File in Transaction Management, Implicit Transaction, Schedules.	12
Unit IV	Concurrency Control : Introduction Concurrency Control, Need for Concurrency, Locking Protocols, Transaction Recovery, Save Points Isolation Levels, SQL Facilities for Concurrency and Recovery.	12
Unit V	File Structure and Indexing : Operations on files, File of Unordered and ordered records, overview of File organizations, Indexing structures for files (Primary Index, Secondary Index, Clustering Index), Multilevel Indexing using B and B+ trees	12
Practical's U/A : 20 Marks		
1. Test/ Tutorial : 10 Marks		
2. Oral / Writing of Algorithms in Journal / File : 10 Marks		
Reference Books : <ol style="list-style-type: none"> 1. A Silberschatz, H Korth, S Sudarshan, "Database System and Concepts", fifth Edition McGraw-Hill. 2. R. Elmasri, S.B. Navathe, Fundamentals of Database Systems 6th Edition, Pearson Education, 2010. 3. Rob, Coronel, "Database Systems", Seventh Edition, Cengage Learning 4. C.J.Date, A.Kannan, S.Swamynathan, —An Introduction to Database SystemsI, Eighth Edition, Pearson Education, 2006. 5. Raghu Ramakrishnan, —Database Management Systems II, Fourth Edition, McGraw-Hill 6. G.K.Gupta, Database Management SystemsI", Tata McGraw Hill 7. Database Systems- A practical approach to Design, Implementation and Management by Thomos Connolly, Carolyn Begg, 3rd Edition, Pearson Education. 		

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B.C.A. Vth Semester Syllabus (CBCS)
Paper No. XXVII – VB

Total - 100 marks

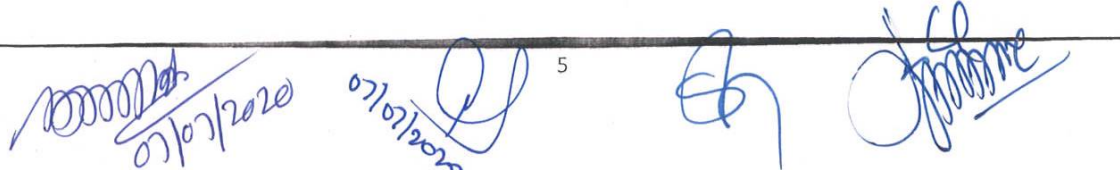
Visual Basic

Theory – 80 Marks
Sessional – 20 Marks

		No. of Lectures
Unit I	Introduction to Visual Basic : Introduction, Integrated Development Environment Overview, Introduction Graphical User Interface (GUI), Programming Language (Procedural, Object Oriented, Event Driven), How to use VB, edition, installation	10
Unit II	Introduction to Visual Basic Programming: Introduction, Visual Programming and Event-Driven Programming, A Simple Program: Printing a Line of Text on the Form, Variables, Variables Public, Private, Static, Constants, Data Types, Naming, rules/conventions, Constants, Named & intrinsic, Declaring variables, Scope variables, Val Function, Arithmetic Operations, Formatting Data. Branching and Looping Statement: If , Select Case, Iterations :While, For, Until	12
Unit III	Arrays and Procedures, Functions : Types of array, control array, Built in and user defined function OOPs in VB : Classes, creating a new Class, Creating a new object using a class, choosing when to create New Objects, The Initialize & Terminate events, Inheritance. Exception handling: Introduction, When Error Handling Should be Used, A Simple Error-Handling Example: Divide by Zero, Nested on Error Statements, Error Object, and Resume Statement. Event handling: Mouse handling	12
Unit IV	Basic Graphical User Interface Concepts: Introduction to forms and Controls: Introduction, Creating , adding, removing Forms in project, Hide, Show Method, Load, Unload Statement, Me Keyword, Referring to Objects on a Different Forms. Adding controls on form Working with Properties and Methods of each Controls (Text Box Control, MaslcEdit Control, Combo Box Control, List Box Control, Scrollbars, Slider Control, Menus, Pop-Up Menus, Function MsgBox), Creating an application MENU : Creating a menu system, Creating and accessing pop-up menu, Modifying menus at runtime, adding menu items at run-time, data access methods, creating, reading and writing text files	14
Unit V	Data Control , Connectivity with SQL server , Operations of database through coding , ADO Data Control , Advantages of ADODC over DC , Studying the properties and Methods of ADODC , Connectivity with SQL server ,Report Generation , Developing ADO application through ADODC and coding , Report Generation	12
	Sessional Works : 20 Marks • College can take decision accordingly as per their convenience.	
	Reference Books: 1. Mastering Visual Basic 2. Visual Basic Black Book	

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B.C.A. Vth Semester Syllabus (CBCS)
Paper No. XXVIII – Organizational Behavior

Total - 100 marks

Theory – 80 Marks
Sessional – 20 Marks

		No. of Lectures
Unit I	Evolution of Management thought: Classical School to Contingency School. Contribution of Management thinkers and proponents: Fredrick Taylor, Max Weber, Henri Fayol, Frank and Lillian Gilbreth, Henry Gantt, Elton Mayo and others. OB Studies and Experiments: Classical Conditioning Theory, Hawthorne Studies and others.	12
Unit II	Individual Dynamics – I Personality: Conceptualization, Discussions on Type vs. Trait Theory and Nature vs. Nurture Type Theory: Freud’s Theory of Psychosocial Stages, Carl Jung’s Theory of Personality , Theory X vs. Theory Y and others. Trait Theory: Myer-Brigg’s Trait Indicator, Big-Five Personality Traits and others.	12
Unit III	Individual Dynamics - II Theories of Motivation: Maslow’s Hierarchy of Needs Theory, Herzberg’s Two-Factor Theory, McClelland Human Motivation Theory, Alderfer’s ERG Theory, Vroom’s Expectancy Theory, Adam’s Equity Theory, Skinner’s Reinforcement Theory, Locke’s Goal Setting Theory, Deci and Ryan’s Cognitive Evaluation Theory	12
Unit IV	Group Dynamics Communication: Concept, Process, Communication channels, Barriers and Implications for Managers, Group Development: Definition, Foundations of Group Behavior, Bruce Tuckman’s Stages of Development, Group Properties (roles, norms, status, size and cohesiveness) Decision Making: Group vs. Individual Decision Making, Group decision making techniques, Stages and Process of Decision Making	14
Unit V	Organizational System Organizational Structures: Concept, Design Types, Chain of Command, Span of Control, Centralization vs. Decentralization. Stress Management: Concept of Work Stress, Emotional Intelligence, and Measures for managing stress. Managing Stress related to Business & Employment in Post COVID-19 Era.	10
	Sessional Works : 20 Marks 1. Group Discussion : 10 Marks 2. Test / Tutorial : 10 Marks	
	Reference Books: 1. Robbins, S., Judge, T., & Vohra, N. (2016). Organizational Behavior. (16e, Ed.) Mullins, L. J. (2010). Management and Organizational Behaviour. (9th, Ed.) 2. Bratton, J. (2016). Introduction to Work and Organizational Behaviour. (3rd, Ed.) 3. Butler, M., & Rose, E. (Eds.). (n.d.). Introduction to Organisational Behaviour. 4. Aswathappa, K. (2017). Organisational Behaviour. (12th, Ed.) 5. Rollinson, D. (2008). Organisational Behaviour and Analysis: An Integrated Approach. (4th, Ed.)	

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B.C.A. Vth Semester Syllabus (CBCS)
Paper No. XXIX – Software Engineering

Total - 100 marks
Theory – 80 Marks
Sessional – 20 Marks

		No. of Lectures
Unit 1	Overview of systems Analysis and design System concepts : Types of systems: Information System, System Development Life cycle, Role & Skills of system Analyst, Models: 1) Waterfall 2) Prototyping 3) Spiral (including WIN-WIN Spiral) 4) RAD 5) Group Based Approach: JAD 6) Object Oriented methodology	12
Unit II	A) Current trends in Software Engineering : 1 Software Engineering for projects & products. 2 Introduction to Web Engineering and Agile process B) Information requirement Analysis: 1) Decision Analysis Tools: Decision Tree, Decision Table, Structured English 2) Functional Decomposition Diagram 3) Process modeling with physical and logical Data Flow Diagrams 4) Data Dictionary Case Studies on Decision analysis tools , FDDs, DFDs should be covered	14
Unit III	Software Analysis : Requirements Engineering; Feasibility Study : economical, operational, social, technical; Requirements Elicitation; Requirements Analysis; Requirements Validation and Management. Size Estimation; Cost Estimation Models; COCOMO, COCOMO II; Software Risk Management. Activities in Requirements Determination : a) Requirements Anticipation b) Requirements Investigation c) Requirements Specifications	14
Unit IV	Software requirement Specification (SRS) : 1] Structure and contents of the requirements specification analysis modeling, types of requirements - functional and non-functional , Quality criteria, requirements definition ,SRS format, Fundamental problems in defining requirements. 2] Structure and standards followed for SRS. 3] characteristics of good SRS – Unambiguous, complete, verifiable, consistent, modifiable, traceable, usable during maintenance	12
Unit V	Maintenance : Types of Maintenance, Maintenance Cost, Reverse Engineering, Introduction to legacy systems, Documentation : Types, Role of documentation maintenance	10
	SESSIONAL WORK: 20 Marks College can take decision as per their convenience.	
	Reference Books : 1. System Analysis and Design by Jalote 2. Software Engineering by Sommerville 3. Software Engineering - W S Jawadekar 4. System Analysis & Design methods – Whiten, Bentley 5. System Analysis & Design – Elias Awad 6. Object Oriented Modelling& Design – James Rumbaugh 7. Analysis & Design of Information System – James Senn 8. Analysis & Design of Information System – V. Rajaraman 9. Software Engineering Concepts-Richard Fairley	

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B.C.A. Vth Semester Syllabus (CBCS)
Paper No. XXX – Banking & Insurance (Elective)

Total - 100 marks

Theory – 80 Marks

Sessional – 20 Marks

No. of Lectures

Unit I	Banking in India : Meaning and definition of Bank, Banking and Banking Company. Commercial Banks: Introduction, Structure of Commercial Banks in India, functions, credit creation by commercial Banks, Principle of liquidity and profitability. Co-operative Banks: Introduction, Structure, organization and management, progress and problems. Regional Rural Banks: Introduction, objectives, organization and management, progress and problems.	10
Unit II	Reserve Bank of India The Reserve Bank of India: Introduction, organization and management General functions, regulation of money and credit supply, credit control measures	08
Unit III	Banker and Customer The relationship between Banker and Customer, general relationship — special relationship, statutory obligation to honor Cheque - Bankers lien. Duty to maintain secrecy of customers' account, right to claim incidental charges, right to charge compound interest, Banking Ombudsman.	10
Unit IV	Account of Customers: i) General precautions for opening accounts, KYC (Know Your Customer), Types of deposit accounts, fixed deposit receipt, nomination, TDS. . ii) Special types of customers, minor, married women, Lunatic; Partnership, Joint stock companies unincorporated bodies. Executor and Administrators. Trusts Accounts, Joint Accounts. iii) Principles of sound lending, secured and unsecured advances, Forms of advances, iv) Modes of charging security: Lien, Pledge, Mortgage, Assignment, Hypothecation,	10
Unit V	Electronic Banking (E-Banking): Introduction, Traditional banking v/s E-Banking, electronic delivery channels (ATMs, Smart cards, mobile banking, internet banking,) t-banking transaction, Truncated cheques and electronic cheques, MCgh product, Advantages of Banking, constraints in E-Banking, security measures, RTGS & NEFT. E-Banking During & Post COVID-19 Pandemic.	10
Unit VI	Insurance : Concept and importance of Insurance, Principles of Insurance, Growth & Development of Indian Insurance Industry – Regulations of Insurance Business and The Emerging Scenario – Introduction to Life & General Insurance – Life Insurance: Features of Life Insurance – Essentials of Life Insurance Contract – Kinds of Insurance Policies - Premium determination – Life Policy Conditions, Risk and Insurance.	12
	Sessional Marks : 20 Marks 1. Test / Tutorial : 10 Marks 2. Preparing Instruments of Bank/ Insurance as per convenience. : 10 Marks	
	References Books : 1 Cordon & Natarajan, Banking Law and Practice 2008, Himalaya Publishing Mumbai. 2 Insurance Laws and Practices. Excel Books Private Limited, A-45, New Delhi. 3 KC. Shekher: Banking Theory & practice, Vahi Educational Books, Sahibabad (U.P). 4 Read, E.W., Commercial Bank Management, Harper and Row Publisher New York.	

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B.C.A. Vth Semester Syllabus (CBCS)
Paper No. XXX – Retail Management (Elective)

Total - 100 marks

Theory – 80 Marks
Sessional – 20 Marks

		No. of Lectures
Unit V	Introduction to Retailing: Meaning, Definition, Scope of Retailing, Role and Functions of retailers, Advantages of Retailing, Organized and Unorganized Retailing, Indian Retail Scenario Vs. Global Retail Scenario, Role of Retail in Nation's Economy	12
Unit V	Theories and Formats of Retailing: 1. Environmental Theory 2. Cyclical Theory 3. Conflictual Theory. Formats of Retailing Store based, Non store and Service retailing	12
Unit V	Retailing Planning and Development: Understanding the Retail Customer Marketing Research for Retailing, Strategic Retail Planning Process, - Retail Strategies: Growth Strategies Positioning a retail outlet; developing a retail brand strategy, expansion strategy, pricing strategy, Retail Location and Site Selection.	12
Unit V	Merchandise Management: Meaning of Merchandising, Factors influencing Merchandising, Basics & Types of Retail Merchandising, Concept & Process of merchandise Planning, Methods of Merchandise Procurement, Retail Pricing and Evaluating.	12
Unit V	Retail HRM & New Trends in Retailing: Identifying Manpower requirements, Recruitment, Selection & Training, Emerging Trends in Retailing in India, Technology in Retailing, Non store retailing (e-retailing) - The Impact of Information Technology in retailing. Legal aspects in retailing, Social issues in retailing, Ethical issues in retailing. Innovative Retail During & Post COVID-19 Pandemic.	12
	Sessional : 20 Marks 1. Test / Tutorial : 10 Marks 2. Preparing Market Research Plan of Product : 10 Marks	
	Reference Books : 1. Retailing Management : Michael Levy and Barton Weitz, TMGH,5th Edition 2. Retail Management: Swapna Pradhan, TTMGH 3. Retail Management – Chetan Bajaj; Rajnish Tuli; Nidhi Varma - Oxford ks 4. Fundamentals of Retailing: K V S Madaan, McGraw Hill 5. Retail Marketing Management: David Gilbert, Pearson Publication 6. Retail Management : Arif Sheikh, Himalaya Publishing	

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Circular file

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DR. BABASAHEB AMBEDKAR MARATHWADA UNIVERSITY**CIRCULAR NO.SU/Commerce & Management/ IV Sem./21/2019**

It is hereby inform to all concerned that, on the recommendation of the Dean, Faculty of Commerce & Management, the Hon'ble Vice-Chancellor in his emergency powers under section-12(7) of the Maharashtra Public Universities Act, 2016 has accepted the syllabi of **B.Com., BBA & BCA IV Sem.** under Choice Based Credit and Grading System on behalf of the Academic Council to be applied from the Academic Year 2019-2020 and onwards. The said syllabi are also available on bamu.ac.in on University website.

All concerned are requested to note the contents of this circular and bring notice to the students, teachers and staff for their information and necessary action.

University Campus,
Aurangabad-431 004.

REF.NO. SU/ COMMERCE/2019-20

4388-4638

Date:- 15-11-2019.

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*Deputy Registrar,
Syllabus Section.*

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- 6] The Public Relation Officer,
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**DR. BABASAHEB AMBEDKAR
MARATHWADA UNIVERSITY,
AURANGABAD.**



Curriculum of

BACHELOR OF COMPUTER APPLICATION

(BCA)

IIIND YEAR

FOURTH SEMESTER

under Choice Based Credit & Grading System

[Effective from the Academic Year 2019-20 & onwards]


DR. BABASAHEB AMBEDKAR MARATHWADA UNIVERSITY, AURANGABAD.**FACULTY OF COMMERCE & MANAGEMENT.**

Syllabus - Bachelor of Computer Application (BCA)


Choice Based Credit System (CBCS) - 2019-20

Semester & Credits	Core Course [04]	Ability Enhancement Compulsory Courses [AEC] [01]	Discipline Specific Elective [DSE] [01]
IV Credit 24	1. Cost Accountancy 2. Java Programming 3. MIS & DSS 4. Business Law – II	1. Entrepreneurship Development	Elective Paper [Any One] 1. PC Maintenance OR 2. Advance Networking
Total Credits 24	No. of Credits : 16	No. of Credits :04	No. of Credits : 04


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Structure of B. C. A. Fourth Semester (CBCS) 2019 - 20

Paper Number	Subject/ Title of the Paper	Course	Weekly		Credits		IA	UA	Total Marks	Duration of Theory Exam
			Th	Pr	Th	Pr				
XIX	Cost Accountancy	Core Course	4	-	4	-	20	80	100	3 Hrs
XX	Java Programming	Core Course (Theory)	3	-	2	-	-	50	50	2 Hrs
		Practical	-	1	-	2	-	50	50	2 Hrs
XXI	MIS & DSS	Core Course	4	-	4	-	20	80	100	3 Hrs
XXII	Business Law – II	Core Course	4	-	4	-	20	80	100	3 Hrs
XXIII	Entrepreneurship Development	Ability Enhancement Compulsory	4	-	4	-	20	80	100	3 Hrs
XXIV	1.PC Maintenance OR 2.Advanced Networking	Discipline Specific Elective [Any One] (Theory)	3	-	2	-	-	50	50	2 Hrs
		Practical	-	1	-	2	-	50	50	2 Hrs
Total			22	02	20 + 4 = 24		80	520	600	--

*Note:- As per UGC norms one theory lecture is equal to two practicals.

B.C.A. IVth Semester Syllabus (CBCS)
Paper No. XIX – Cost Accountancy

Theory – 80 Marks
Sessional – 20 Marks

		Lectures
Unit - I	Cost Accounting : Definition, Nature, & Scope of Cost Accounting, Distinction between Cost, Financial and Management Accounting, Classification & Elements of Cost, Material, Labour, Expenses, Direct & Indirect Cost, Overheads.	(10)
Unit – II	Costs : Prime Cost, Factory / Works Cost, Administrative Cost, Total Cost, Cost of Sales	(08)
Unit - III	Preparation of Cost Sheet :	(14)
Unit - IV	Material : Purchasing, Purchase Requisition, EOQ, Purchase Procedure, Receiving & Recording of Material, Documents, Goods Received Note, Bin Card, Issue of Materials, Pricing Method, LIFO, FIFO, Average Method.	(14)
Unit - V	Wages : Compensation, Methods of wage payment, Fixed Rate, Piece Rate, Contract, Bonus, Halsay & Rowan Plan.	(14)
	Practical: 20 Marks (to be conducted by the department in each college as per convenience) 1. Test- 05 2. Tutorial- 10 3. Seminar- 05	
	Reference Books : 1. Practical Costing : Khanna, Pande and Ahuja 2. Cost Accounting : Bhatia HSM 3. Principles & Practices of Cost Accounting : N. K. Praasad 4. Cost Accounting (Methods & Problems) : B. K. Bhar 5. Fundamental of Costing: S. N. Maheshwari.	

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B.C.A. IVth Semester Syllabus (CBCS)
Paper No. XX – Java Programming

Theory – 50 Marks
Sessional – 50 Marks

		Lectures
Unit - 1	Overview of Java Language : Java History, Java Features, How Java Differ from C and C++, JVM, Java Environment, Java Programming Structure, Types of Comment, Java Tokens: Reserve Keywords, Identifiers, Literals, Operators, Separators, Variables, Constant, Data Types, Array, Type Casting, Control Statement : Branching statement, Looping statement	(15)
Unit – II	Classes, Objects and Methods : Introduction, Defining Class : Fields Declaration, Methods Declaration, Creating Objects, Visibility Control, Use of ‘this’ Keyword, Method Parameters, Method Overloading, Static Members, Final Method, Inheritance and It’s Types, Method Overriding, Final Variable, Method and Final Class, Interface, Package and Exception Handling : Defining and implementing interface, Inner Classes, Package: Create Package, Accessing Package, Exception, Types of Error, Multiple catch statement, Creating User defined Exception, Finally clause	(15)
Unit – III	String and Stream : String Classes, String Buffer Class, Stream Classes: Types of Streams, Byte Stream Classes, Character Stream Classes Applets : Introduction to Applet , Types of Applet, Applet vs Application , Applet class, advantages of Applet , Applet Lifecycle, My First Applet, Applet tag, Passing Parameters to Applet . Graphics: Basic Shapes: drawLine, drawArc, fillArc, drawPolygon, fillPolygon, Color & Color Methods, Fonts.	(15)
	Practical List: 1) Program to demonstrate Constant Variable. 2) Program to demonstrate scope of Variable 3) Program to demonstrate branching statement 4) Program to demonstrate Looping statement 5) Program to demonstrate simple class 6) Program to demonstrate method parameter 7) Program to demonstrate method overloading 8) Program to demonstrate constructor 9) Program to demonstrate static member 10) Program to demonstrate Method overriding 11) Program to demonstrate Final variable, Method and Final Class. 12) Program to demonstrate Finilize method() 13) Program to demonstrate Array and It’s types. 14) Program to demonstrate String class and it’s method. 15) Program to demonstrate String Buffer and it’s method.	(15)



	16) Program to demonstrate inheritance and its Types 17) Program to demonstrate Abstract method and Abstract Class. 18) Program to demonstrate Multiple catch statement 19) Program to demonstrate finally clause 20) Program to demonstrate package 21) Program to demonstrate interface 22) Program to demonstrate Applet life cycle 23) Program to demonstrate param tag 24) Program to demonstrate Graphics class	
	Practical's U/A : 50 Marks 1. One Test : 10 Marks 2. Oral : 20 Marks 3. Writing of Algorithms in Journal / File : 20 Marks	
	Reference Books : 1. Complete Reference Herbert Schildt Tata McGraw- Hill Publishing company Ltd. 2. Java 2 programming black books Steven Horlzner DreamTech Press 3. Core Java Volume-I Fundamentals Eighth Edition Cay S. Horstmann, Gary Cornell, Prentice Hall Sun Microsystems Press 4. Programming with Java E Balagurusamy The McGraw Hill Education Pvt. Ltd. New Delhi	

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**B.C.A. IVth Semester Syllabus (CBCS)
Paper No. XXI – MIS & DSS**

**Theory – 80 Marks
Sessional – 20 Marks**

		Lectures
Unit - I	Concept, Definition, Characteristics, Objectives, Role and impact of MIS, Management as a control system, MIS: A support to the management, Application of MIS, Organization Effectiveness, Decision making concept, Decision making process, Organizational decision making & MIS and decision making.	(12)
Unit – II	Information: A quality product. IT enabled services, e business, wireless technologies etc. Information system in business, Computer based Information system, limitation and disadvantages of IS, Human as an Information processor, knowledge and knowledge management system, business intelligence.	(12)
Unit - III	System concept and control, types of system, general model of MIS, need of system Analysis, System Development Life cycle, development process of MIS, Strategic design of MIS, Business-process, Process mode of an organization. MIS and BPR.	(12)
Unit - IV	DSS: concept and Philosophy, objectives and characteristic of DSS, major functions of DSS, Components of DSS, DSS generator and tools, limitations of DSS, GDSS, components of GDSS, MIS and benefits of DSS and ONLINE DATA PROCESSING	(12)
Unit - V	Knowledge system, Expert system, application of ES, benefits and Limitations of ES, ERP, ERP models and modules, benefits of ERP, ERP implementation, SCM, CRM.	(12)
	Sessional Works : 20 Marks • College can take decisions accordingly.	
	Reference Books: 1. Decision Support & Expert System, Efraim Turban 2. W.S.Jawadkar, Management Information System 3. Dr. Akther Anwar, Fundamentals to Decision Support System 4. Dr. A.K.Gupta, Management Information System, S.Chand 5. V. Murthy, Management Information System, Himalaya publishing house, millennium edition	

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B.C.A. IVth Semester Syllabus (CBCS)
Paper No. XXII – Business Law – II

Theory – 80 Marks
Sessional – 20 Marks

		Lectures
Unit – I	Contract Act: - Special Contracts - Law of Indemnity, Guarantee Contracts, Law of Bailment & Pledge, Agency Contracts.	(12)
Unit – II	Company Law 2013 : Introduction of Company Act, Meaning & Definitions, Features of Co. Act, Types of Company, Share Capital & its types, Incorporation-Formation of company, Memorandum & Articles of Association.	(12)
Unit - III	SEBI Act – 1992 :- Introduction of the Act, Meaning & Definitions, Basic Characteristics of the Act, Obligation of SEBI, Issue of Capital, Discloser, Listing & its role in Stock Market.	(12)
Unit - IV	Cyber & I.T. Act – 2000 (with Amendment) : Need & Significance in modern era, Character & User of Internet Technology, On Line Contracts, Hacking, Phishing, Privacy Terrorism, Privacy, Section 66A	(12)
Unit - V	Micro, Small & Medium Enterprises Development Act 2006 {MSMED Act - 2006} : Introduction, Definitions, Features of the Act, Establishment of National Board of MSME, Power & Duties of the Board, Classification of MSME, Promotional Measures of the Act.	(12)
	Sessional Works : 20 Marks 1. One Test : 05 Marks 2. One Tutorial : 05 Marks 3. One Seminar : 05 Marks 4. Group Discussion : 05 Marks	
	Reference Books: 1. Mercantile of Law - N.D.Kapoor 2. Business Law - Dr.Nowlakhia 3. Indian Contract Act – Dr. Avtarsingh 4. Mercantile & Industrial Law – Kuchal 5. Micro, Small & Medium Enterprises Development Act 2006{MSMED Act - 2006} – (Law Policies & Incentive- Abha Jaiswal, IIBF, Taxman 6. HandBooks for MSME Enterprises – ICSI 7. MSME at a Glance – GOI Ministry of MSME	

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B.C.A. IVth Semester Syllabus (CBCS)
Paper No. XXIII – Entrepreneurship Development

Theory – 80 Marks
Sessional – 20 Marks

		Lectures
Unit - I	Originating Theories of Entrepreneurship - Economic Theory, Sociological Theory, Psychological Theory, Innovative theory of Entrepreneurship by Joseph Schumpeter. Theory of Achievement Motivation by MC Clelland – The Kakinada Experiment. Hoselitz sociological theory.	(10)
Unit – II	Types of Entrepreneurship - Recent Trends – Sociopreneur, edupreneur, ecopreneur and agropreneur. Women Entrepreneurs, Self Help Groups.	(08)
Unit - III	Identification of Business Opportunities. Environment scanning – meaning and benefits, Factors considered for environment scanning, Socio-cultural, economic, technical, demographic, legal and political, geographical and international factors, Sources and steps involved in identification of business opportunities.	(14)
Unit - IV	Market Research– Meaning, need and importance of market research. Techniques in Marketing Research - Field Survey Technique, Test Marketing, Delphi Technique, Desk Research, Observation Method and Experiment Method	(14)
Unit - V	Innovation in Entrepreneurship – Purposeful innovation – concept, need, process, principles of purposeful innovation, Incubation centres – Meaning, Services and role of incubation centres.	(14)
	SESSIONAL WORK: 20 Marks 1) One test 05 marks 2) One tutorial 05 marks 3) Seminar and GD 10 Marks	
	Reference Books : 1. Desai Vasant, Dynamics of Entrepreneurship development. 2. Drucker, Peter , Innovation and Entrepreneurship – Practice and principals. 3. Paul, Jose, Kumar Ajith. - Entrepreneurship Development and management – Himalaya Publication House. 4. Khanka, S.S. Entrepreneurship Development – Sultan Chand Publication. 5. Gupta, C.B. Shrinivasan - Entrepreneurial Development, Sultan Chand Publication.	

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B.C.A. IVth Semester Syllabus (CBCS)
Paper No. XXIV – PC Maintenance

Theory – 50 Marks
Practical's U/A – 50 Marks

		Lectures
Unit - I	P.C. Architecture : Computer Definition, Characteristics, of computers, Basic Application of Computer, Generations of Computers. Components of Computer System, Central Processing Units(CPU), Input / Output Devices, Computer Memory, Primary and Secondary Memory, Magnetic and Optical Storage Devices, Concept of Hardware and Software, Types of Software.	(15)
Unit – II	P.C. Assembly : Opening the System, Closing the System, Tips for working inside a PC Mounting Motherboard in Cabinet, Installation of Card, Device and Then Connecting Cables, Role of CMOS Setup Basic CMOS Optimization, Hidden CMOS settings.	(15)
Unit - III	Motherboard and Processor : Study of different types of Motherboards, Motherboard Configuration, Identifying Internal and External Connectors, Types of data cables, Types of Processor – Intel Pentium IV, Dual Core, Core 2 Duo, Quad Processor, Graphics Card Types of Graphics cards.	(15)
	Practical's U/A : 50 Marks 1.BIOS Configuration : Study of BIOS Set-up Advance set-up , Boot configuration, Boot Menu. 2.Installation of OS – Windows XP / 7 / 10 3.Hard Disk Formatting of Hard Disk, Partitioning of Hard Disk in different logical drives, Disk Defragmentation, Disk clean up, Scan disk etc 4.Installation of Device Drivers – Printers, Scanners etc 5.Application Software Installation – MS Office, PDF Reader, Antivirus etc Subject Teacher can add more Practical's based on above syllabus.	(15)
	References Books : 1.Computer Fundamentals (Sixth Edition) : P. K. Sinha 2.Troubleshooting and Maintaining Your PC All-in-One : Dan Gookin. 3.Computer System Architecture : M. Morris 4.Computer Fundamentals : Amita Goel 5.Fundamental of Computers : E. Balaguruswamy 6.PC Repair and Maintenance a practical guide : J.Rosenthal, K.Irwin 7.3 Easy PC Maintenance & Repair : Philip Laplante, McGraw Hill Pub.	

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**B.C.A. IVth Semester Syllabus (CBCS)
Paper No. XXIV – Advance Networking**

**Theory – 50 Marks
Practical's U/A – 50 Marks**

		Lectures
Unit - I	Basics of Computer Networks - Computer Network, Definition, Goals, Applications, Structure, Components, Topology – Bus, Star, Ring, Mesh, Types of Networks , LAN, MAN, WAN, Internet, Broadcast & Point-To-Point Networks communication Types – Serial, Parallel, Modes of Communication : Simplex , Half Duplex , Full Duplex , Server Based LANs & Peer-to-Peer LANs ,Comparison of both, Protocols and Standards	(15)
Unit – II	Network Models - Design issues of the layer, Protocol Hierarchy , ISO-OSI Reference Model - Layers in the OSI Model , Functions of each layer, Terminology, SAP , Connection Oriented services, connectionless services , Peer Entities Internet Model (TCP/IP) , Comparison of ISO-OSI & TCP/IP Model , Addressing - Physical Addresses , Logical Addresses ,Port Addresses	(15)
Unit - III	Transmission Media - Guided Media(Wired), Coaxial Cable, Twisted Pair , Fiber Optics Cable , Unguided Media (Wireless) Network Connectivity Devices - Categories of Connectivity Devices, Passive & Active Hubs, Repeaters, Bridges, Transparent Bridges(Loop Problem, Spanning Tree) , Source Routing Bridges, Switches , Router, Gateways Network Security Devices –Firewalls, Packet-Filter firewall, Proxy firewall	(15)
	University Practical Exam. : 50 Marks Any suitable practical based on above syllabus.	15
	Reference Books : 1.Computer Networks - Andrew Tanenbaum (III Edition) 2.Internetworking Technology Handbook , CISCO System 3.Data Communications & Networking - Behrouz Ferouzan (III Edition) 4.Complete Guide to Networking - Peter Norton	

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