

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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[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 Ambekar Marathwada University.
- 6] The Public Relation Officer,
- 7] The Record Keeper.

**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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