BHARATHIAR UNIVERSITY : COIMBATORE-641 046

B.Com. (Bachelor of Commerce)

(For the students admitted during the academic year 2010-11 and onwards)

SCHEME OF EXAMINATION – CBCS PATTERN

Part	Study Components	Course Title	Ins. hrs / week	Dur.Hr	CIA	Marks	Total	Credits
	SEMESTER –I							
I	Language-I		6	3	25	75	100	4
II	English-I		6	3	25	75	100	4
III	Core I – Principles of Accountancy		5	3	25	75	100	4
III	Core II–Business Organization & Office Management		5	3	25	75	100	4
III	Allied Paper I – Agricultural Economic of India		6	3	25	75	100	4
IV	Environmental Studies #		2	3	-	50	50	2
	SEMESTER –II							
I	Language-II		6	3	25	75	100	4
II	English-II		6	3	25	75	100	4
III	Core III – Financial Accounting		5	3	25	75	100	4
III	Core IV – Principles of Marketing		5	3	25	75	100	4
III	Allied Paper II – Economic Analysis		6	3	25	75	100	4
IV	Value Education – Human Rights #		2	3	-	50	50	2
	SEMESTER –III							
III	Core V – Higher Financial Accounting		7	3	25	75	100	4
III	Core VI – Commercial Law		6	3	25	75	100	4
III	Core VII – Principles of Management		6	3	25	75	100	4
III	Allied : III - Mathematics for Business		6	3	25	75	100	4
IV	Skill based Subject -1 : Business Application Software-I		3	3	20	55	75	3
IV	Tamil @ / Advanced Tamil # (or)Non-Major Elective–I Yoga for Human Excellence # / Women's Rights # Constitution of India #		2	3	50		50	2
	SEMESTER –IV							
III	Core VIII – Corporate Accounting-I		5	3	25	75	100	4
III	Core IX – Computer Applications in Business		4	3	25	75	100	4
III	Core X – Company Law and Secretarial Practice		4	3	25	75	100	4
III	Core XI – Executive Business Communication		3	3	20	55	75	3
III	Core XII – Banking Theory		3	3	20	55	75	3
III	Allied : IV : Statistics for Business		6	3	25	75	100	4
IV	Skill based Subject-2 : Computer Applications (MS-Word and MS-Excel)-Practical –I		3	3	30	45	75	3
IV	Tamil @ / Advanced Tamil # (or) Non-major elective -II : General Awareness #		2	3	50		50	2

	SEMESTER –V						
III	Core XIII –Corporate Accounting-II	6	3	25	75	100	4
III	Core XIV – Banking Law and Practices	5	3	25	75	100	4
III	Core XV – Cost Accounting	5	3	25	75	100	4
III	Core XVI – Income Tax Law and Practice	6	3	25	75	100	4
III	Elective –I :	5	3	25	75	100	4
IV	Skill based Subject-3 : Business Application Software-II	3	3	20	55	75	3
	SEMESTER –VI						
III	Core XVII – Management Accounting	6	3	25	75	100	4
III	Core XVIII - Principles of Auditing	5	3	25	75	100	4
III	Core XIX - Indirect Tax	6	3	25	75	100	4
III	Elective –II :	5	3	25	75	100	4
III	Elective–III :	5	3	25	75	100	4
IV	Skill based Subject-4 : Computer Applications : MS-PowerPoint, MS-Access and Tally 9.2 -Practical-II	3	3	30	45	75	3
V	Extension Activities @	-		50	-	50	2
	TOTAL					**3500**	**140**

$ Includes 25% / 40% continuous internal assessment marks for theory and practical papers respectively.
@   No University Examinations. Only Continuous Internal Assessment (CIA)
# No Continuous Internal Assessment (CIA). Only University Examinations.

List of Elective Papers (Colleges can choose any one of the paper as electives)		
Elective – I	A	Business Finance
	B	Brand Management
	C	Fundamentals of Insurance
Elective – II	A	Entrepreneurial Development
	B	Supply Chain Management
	C	Principles of Web Designing
Elective - III	A	Financial Markets
	B	Insurance Legislative Framework
	C	Project Work

BHARATHIAR UNIVERSITY,COIMBATORE-641 046
B.Com – CA (Computer Applications)
(For the students admitted during the academic year 2015-16 and onwards)

SCHEME OF EXAMINATION – CBCS PATTERN

Part	Study Components	Course Title	Ins. hrs / week	Dur.Hrs	CIA	Mark	Total	Credits
				Exam				
	SEMESTER – I							
I	Language-I		6	3	25	75	100	4
II	English-I		6	3	25	75	100	4
III	Core I – Principles of Accountancy		4	3	25	75	100	4
III	Core II – Introduction to Information Technology		4	3	25	75	100	4
III	Allied PaperI : Mathematics for Business		4	3	25	75	100	4
III	Core-IV:Computer Applications: MS Office - Practical-I		4	3	-	-	-	-
IV	Environmental Studies #		2	3	-	50	50	2
	SEMESTER – II							
I	Language-II		6	3	25	75	100	4
II	English-II		6	3	25	75	100	4
III	Core III – Advanced Accounting		7	3	25	75	100	4
III	Core IV–Computer Application: MS Office - Practical-I		4	3	40	60	100	4
III	Allied Paper II – Statistics for Business		5	3	25	75	100	4
IV	Value Education – Human Rights #		2	3	-	50	50	2
	SEMESTER – III							
III	Core V – Principles of Marketing		5	3	25	75	100	4
III	Core VI – Database Management System		5	3	25	75	100	4
III	Core VII – Cost Accounting		6	3	25	75	100	4
III	Allied : III - Managerial Economics		5	3	25	75	100	4
III	Core-VIII : Computer Applications: Oracle -Practical-II		4	3	-	-	-	-
IV	Skill based Subject-1 : Commercial Law		3	3	20	55	75	3
IV	Tamil @ / Advanced Tamil #(or)Non-major Elective–I : Yoga for Human Excellence # / Women's Rights # Constitution of India #		2	3	50		50	**2**
	SEMESTER – IV							
III	Core IX – Management Accounting		6	3	25	75	100	4
III	Core X – Object Oriented Programme with C++		5	3	25	75	100	4
III	Core XI – Executive Business Communication		3	3	20	55	75	3
III	Core XII – Computer Applications : Oracle & C++ Practical-II		4	3	40	60	100	4
III	Core XIII – Banking Theory		3	3	20	55	75	3
III	Allied : IV : Principles of Management		4	3	25	75	100	4
IV	Skill based Subject-2 : Company Law		3	3	20	55	75	3
IV	Tamil @ /Advanced Tamil # (or) Non-major elective - II : General Awareness #		2	3	50		50	2

	SEMESTER – V						
III	Core XIV – Principles of Auditing	4	3	25	75	100	4
III	Core XV – Corporate Accounting	5	3	25	75	100	4
III	Core XVI – E-Commerce Technology	5	3	25	75	100	4
III	Core XVII – Software Development with Visual Basic	4	3	25	75	100	4
III	Core XVIII - Computer Applications : Visual Basic - Practical-III	4	3	-	-	-	-
III	Elective-I :	5	3	**25**	**75**	**100**	4
IV	Skill based Subject-3 : Banking and Insurance Law	3	3	20	55	75	3
	SEMESTER – VI						
III	Core XIX – Management Information System	6	3	25	75	100	4
III	Core XX - Internet and Web Designing	5	3	25	75	100	4

III	Core XXI - Computer Applications : Visual Basic
	                                &Web Designing
	                                Practical-III
		4	3	**40**	**60**	100	4

III	Elective –II :	6	3	25	75	100	4
III	Elective –III :	6	3	25/ 20	75/ 80	100	4
IV	Skill based Subject- 4 : Cyber Law	3	3	20	55	75	3
V	Extension Activities @	-	-	-	-	50	2
	Total					**3500**	**140**

$ Includes 25% / 40% continuous internal assessment marks for theory and practical papers respectively.
@ No University Examinations. Only Continuous Internal Assessment (CIA)
# No Continuous Internal Assessment (CIA). Only University Examinations.

List of Elective Papers (Colleges can choose any one of the paper as electives)		
Elective – I	A	Income Tax Law & Practice
	B	Entrepreneurial Development
	C	Micro Finance
Elective – II	A	Business Finance
	B	Brand Management
	C	Supply Chain Management
Elective – III	A	Indirect Taxes
	B	Financial Markets
	C	Project Work

BHARATHIAR UNIVERSITY,COIMBATORE-641 046
M.Com – CA (Computer Applications)
For the students admitted during the academic year 2012-2013 and onwards)

SCHEME OF EXAMINATIONS : CBCS Pattern

Study Components	Course Title	Ins. hrs / week	Dur.Hrs	CIA	Marks	Total	Credits
Semester I							
Managerial Economics		6	3	25	75	100	4
Marketing Management		7	3	25	75	100	4
Database Management System		6	3	25	75	100	4
Computer Applications: MS Office & Oracle -Practical-I		6	3	40	60	100	4
Elective-I :		5	3	25	75	100	4
Semester-II							
Corporate Accounting		5	3	25	75	100	4
Human Resource Management		5	3	25	75	100	4
Business Resource Methods		5	3	25	75	100	4
Object Oriented Programming with C++		5	3	25	75	100	4
Computer Applications: Tally & C++ -Practical-II		6	3	40	60	100	4
Elective-II :		4	3	25	75	100	4
Semester-III							
Cost and Management Accounting		7	3	25	75	100	4
Visual Basic		6	3	25	75	100	4
Financial Management		6	3	25	75	100	4
Computer Applications: Visual Basic,VB Script - Practical-III		6	3	40	60	100	4
Institutional Training (Report 40 marks and Viva 10 mks.)		-	-	50	-	50	2
Elective-III :		5	3	25	75	100	4
Semester-IV							
Investment Management		6	3	25	75	100	4
Direct Taxes		5	3	25	75	100	4
Java Programming and HTML		5	3	25	75	100	4
Project Work & Viva-Voce (Project-160 & Viva-40) **(OR)**		10	3	-	-	200	8
In lieu of Project work, the following two papers may be opted.		5	3	25	75	(100)	(4)
1. Principles and Practice of Insurance		5	3	25	75	(100)	(4)
2. Industrial Law							
Elective-IV		4	3	25	75	100	4
	TOTAL	-	-	-	-	**2250**	**90**

BHARATHIAR UNIVERSITY: COIMBATORE-641 046
B.Sc. CS/IT/CT/SS/MM/CSA &BCA
(For the students admitted from the academic year **2015-2016** onwards)
SCHEME OF EXAMINATION - CBCS PATTERN

Part	Study Components	Course title	Ins. hrs/ week	Dur.Hrs	CIA	Marks	Total Marks	Credit
					Examinations			
	Semester I							
I	Language – I		6	3	25	75	100	4
II	English – I		6	3	25	75	100	4
III	Core 1: Computing fundamentals and C Programming		4	3	25	75	100	4
III	Core 2: Digital Fundamentals and Architecture		4	3	25	75	100	4
III	Core Lab 1: Programming Lab - C		3	3	40	60	100	4
III	Allied 1: &&		5	3	25	75	100	4
IV	Environmental Studies #		2	3	-	50	50	2
	Semester II							
I	Language – II		6	3	25	75	100	4
II	English – II		6	3	25	75	100	4
III	Core 3: COBOL Programming		5	3	25	75	100	4
III	Core Lab 2: Programming Lab – COBOL		4	3	40	60	100	4
III	Core Lab 3: Programming Lab –Internet Basics		2	3	20	30	50	2
III	Allied 2: &&		5	3	25	75	100	4
IV	Value Education – Human Rights #		2	3	-	50	50	2
	Semester III							
III	Core 4: Data Structures		6	3	25	75	100	4
III	Core 5: C++ Programming		6	3	25	75	100	4
III	Core Lab 3: Programming Lab - C++		5	3	40	60	100	4
III	Allied 3: &&		6	3	25	75	100	4
IV	Skill based Subject I –- & &		5	3	20	55	75	3
IV	Tamil @ / Advanced Tamil# (OR) Non-major elective-1 (Yoga for Human Excellence)# / Women's Rights#		2	3	-	50	50	2
	Semester IV							
III	Core 6: System Software and Operating System		6	3	25	75	100	4
III	Core 7: Java Programming		6	3	25	75	100	4

III	Core Lab 5: : Programming Lab - JAVA	6	3	40	60	100	4
III	Allied 4: &&	6	3	25	75	100	4
IV	Skill based Subject 2 –(lab) &&	4	3	30	45	75	3
IV	Tamil @ /Advanced Tamil # (OR) Non-major elective -II (General Awareness #)	2	3	-	50	50	2
	Semester V						
III	Core 8: RDBMS & ORACLE	6	3	25	75	100	4
III	Core 9: Visual Programming – Visual Basic & Visual C++	6	3	25	75	100	4
III	Core Lab 5: Programming Lab. – V.B.,V C++ & ORACLE	6	3	40	60	100	4
	Elective I &&	6	3	25	75	100	4
IV	Skill based Subject 3- &&	6	3	20	55	75	3
	Semester VI						
III	Core 11: Graphics & Multimedia	5	3	25	75	100	4
III	Core 12: Project Work Lab %%	5	3	-	200	200	8
III	Core Lab 6: Programming Lab - Graphics & Multimedia	6	3	40	60	100	4
III	Elective II &&	5	3	25	75	100	4
III	Elective III &&	5	3	25	75	100	4
IV	Skill Based Subject 4 (lab) - &&	4	3	30	45	75	3
V	Extension Activities @	-	-	50	-	50	2
	Total					3500	140

@   No University Examinations. Only Continuous Internal Assessment (CIA)

No Continuous Internal Assessment (CIA). Only University Examinations.

%%   **see Guidelines for Project Work.**

Note: The Syllabus for the above papers (except **ALLIED - 4: BUSINESS ACCOUNTING**) be the same as prescribed for the academic year 2014-15.   The revised syllabi for the paper Allied 4 **Business Accounting** and **Guidelines for Project Work** are furnished below:

List of Allied, Elective & Skill Based Subjects

COURSE / Subject	B.Sc. Computer Science
Allied-1	Mathematical Structures for Computer Science
Allied-2	Discrete Mathematics
Allied-3	Computer Based Optimization Techniques
Allied-4	Business Accounting
Elective- I	E-Learning*/Computer Networks/ Organizational Behavior*
Elective- II	Network Security and Cryptography/ Artificial Intelligence and Expert Systems / Web Technology
Elective- III	Data Mining*/ Open source software*/Mastering LAN & Trouble Shooting
Skill-1	Software Engineering and Software Project Management*
Skill-2-Lab	Software Project Management- Lab*
Skill-3	Software Testing
Skill-4-Lab	Software Testing Lab

	B.Sc. Information Technology
Allied-1	Mathematical Structures for Computer Science
Allied-2	Discrete Mathematics
Allied-3	Microprocessor & ALP
Allied-4	Embedded systems
Elective- I	Multimedia Systems / Animation Techniques / Business Intelligence*
Elective- II	Network Security and Administration/ Mobile Computing / Internet programming*
Elective- III	E- Learning */Component Technology/ Recent Trends in Enterprise Information Technology*
Skill-1	Introduction to web design & applications
Skill-2-Lab	HTML,XML,JAVA Script-Lab
Skill-3	DOT Net Programming
Skill-4_lab	Dot Net lab

	B.Sc. Computer Technology
Allied-1	Mathematical Structures for Computer Science
Allied-2	Discrete Mathematics
Allied-3	Microprocessor & ALP
Allied-4	TCP/IP Protocol*
Elective- I	Mobile Computing/Distributed Computing/Digital Image Processing
Elective- II	Middle ware Technologies*/Animation Techniques/ Computer installation &Servicing
Elective- III	Data Mining*/Embedded Systems/ Computer Aided Design and Manufacturing
Skill-1	Data communication & Networks
Skill-2	Network lab
Skill-3	Network security & management
Skill-4	Network security lab

	B.Sc. Software Systems
Allied-1	Mathematical Structures for Computer Science
Allied-2	Discrete Mathematics
Allied-3	Database systems
Allied-4	PRINCIPLES OF PROGRAMMING LANGUAGES
Elective- I	E-Commerce/ Design and Analysis of Algorithm*/ Web Technology
Elective- II	Computer Networks/Software Quality Assurance/ Management information Systems
Elective- III	Wireless Mobile Communications /Component Technology/ Mastering LAN & Trouble Shooting
Skill-1	WAP &XML*
Skill-2-lab	XML Lab*
Skill-3	ASP.Net
Skill-4- lab	ASP.Net Lab

	B.Sc. Multi Media & Web technology
Allied-1	Mathematical Structures for Computer Science
Allied-2	Discrete Mathematics
Allied-3	Web Services
Allied-4	Digital Image Processing
Elective- I	Web Technology /Software Engineering/ CASE Tools Concepts and applications*
Elective- II	Flash/Distributed Computing/ Multimedia Systems
Elective- III	3Ds MAX Animation/ /Software Project Management / Organizational Behavior*
Skill-1	Introduction to PHP Programming
Skill-2	PHP Programming Lab
Skill-3	Animation Techniques
Skill-4	Animation – Lab- FLASH

Subject	**B.Sc. Computer Science &Applications**
Allied-1	Mathematical Structures for Computer Science
Allied-2	Discrete Mathematics
Allied-3	Management information Systems
Allied-4	Organizational Behavior*
Elective- I	Client -Server Computing /E-Commerce/Software Engineering
Elective- II	Network Security & Cryptography/Distributed Computing/ Computer Networks
Elective- III	Mobile Computing/Web Technology/Software Testing
Skill-1	Internet Programming*
Skill-2	PHP Programming Lab*
Skill-3	WEB DESIGNING WITH ASP & ASP. Net
Skill-4	ASP LAB

Subject	BCA
Allied-1	Mathematical Structures for Computer Science
Allied-2	Discrete Mathematics
Allied-3	Computer Based Optimization Techniques
Allied-4	Business Accounting
Elective- I	Introduction to compiler design/ PHP & Scripting Language*/ Digital Image Processing
Elective- II	Computer Networks / .Net Programming / Distributed Computing
Elective- III	E-Commerce/ Web Services / Artificial Intelligence and Exp Systems
Skill-1	Web programming*
Skill-2	Web programming lab*
Skill-3	CASE Tools Concepts and applications*
Skill-4	CASE Tools –Lab*

Note: The Syllabus for the above papers will be the same as prescribed from the academic year 2011-12 onwards.   The **Guidelines for Project Work** are furnished below:

GUIDELINES FOR PROJECT WORK

- The aim of the project work is to acquire practical knowledge on the implementation of the programming concepts studied.

- Each student should carry out individually one project work and it may be a work using the software packages that they have learned or the implementation of concepts from the papers studied or implementation of any innovative idea focusing on application oriented concepts.

- The project work should be compulsorily done in the college only under the supervision of the department staff concerned.

Viva Voce

- Viva-Voce will be conducted at the end of the semester by both Internal (Respective Guides) and External Examiners, after duly verifying the **Annexure Report** available in the College, for a total of 200 marks at the last day of the practical session.

- Out of 200 marks, 160 marks for project report and 40 marks for Viva Voce.

BHARATHIAR UNIVERSITY, COIMBATORE.

M. Sc. COMPUTER SCIENCE *(Affiliated Colleges)*
(Effective for the candidates admitted from the academic Year 2015-2016)

SCHEME OF EXAMINATIONS – CBCS PATTERN

Sem.	Study Components	Course title	Ins. hrs/ week	Dur.	CIA	Mark	Total Mark	Credit
	Semester I							
	Paper I Analysis & Design of Algorithms		5	3	25	75	100	4
	Paper II Object Oriented Analysis and Design & C++		5	3	25	75	100	4
	Paper III Advanced Networks		5	3	25	75	100	4
	Paper IV Advanced Software Engineering		5	3	25	75	100	4
	Practical I Algorithm and OOPS Lab		5	3	40	60	100	4
	Practical II Software Testing Lab		5	3	40	60	100	4
II	Paper V Data Mining and Warehousing		4	3	25	75	100	4
	Paper VI Advanced Operating Systems		4	3	25	75	100	4
	Paper VII Internet and Java Programming		4	3	25	75	100	4
	PaperVIII Artificial Intelligence & Expert Systems		4	3	25	75	100	4
	Elective – I		4	3	25	75	100	4
	Practical III Advanced Concept of Internet & Java Programming Lab		5	3	40	60	100	4
	Practical IV Data Mining using R		5	3	40	60	100	4
III	Paper IX Digital Image Processing		4	3	25	75	100	4
	Paper X Advanced Tools in Computing		4	3	25	75	100	4
	Paper XI Network Security and Cryptography		4	3	25	75	100	4
	Paper XII Business Intelligence		4	3	25	75	100	4
	Elective – II		4	3	25	75	100	4
	Practical V Advanced Tools in Computing Lab		5	3	40	60	100	4
	Practical VI Digital Image processing using matlab		5	3	40	60	100	4
IV	Project work and Viva voce						250*	10
	Total						2250	90

* Project report - 200 marks; Viva-voce – 50 marks

ELECTIVE – I.	ELECTIVE – II
1.1. Multimedia and its Applications	2.1. Mobile Computing
1.2. Embedded Systems	2.2.Cloud computing
1.3. Open source systems	2.3.Web Services

BHARATHIAR UNIVERSITY, COIMBATORE.
MASTER OF COMPUTER APPLICATIONS (MCA) DEGREE COURSE
(Affiliated Colleges - Effective from the academic Year 2014-2015)

SCHEME OF EXAMINATIONS – CBCS PATTERN

Semester	Study Components	Course title	Ins. hrs/ week	Dur.	CIA	Marks	Total Marks	Credit
					Examinations			
I	Paper I : Introduction to Information Technology		4	3	25	75	100	3
	Paper II : Computer Organization and Architecture		4	3	25	75	100	3
	Paper III : Problem Solving in C		4	3	25	75	100	4
	Paper IV : Accounting and Financial Management		4	3	25	75	100	3
	Paper V : Web Designing		4	3	25	75	100	4
	Practical I : Problem Solving using C Lab		5	3	40	60	100	4
	Practical II : Web Designing Lab		5	3	40	60	100	4
II	Paper VI : Data Structures		4	3	25	75	100	3
	Paper VII : Relational Database Management Systems		4	3	25	75	100	4
	Paper VIII : Operating Systems		4	3	25	75	100	3
	Paper IX : Object Oriented Analysis and Design & C++		4	3	25	75	100	4
	Paper X : Mathematical Foundations of Computer Science		4	3	25	75	100	3
	Practical III : Data Structures Lab Using C++		5	3	40	60	100	4
	Practical IV : RDBMS Lab		5	3	40	60	100	4
III	Paper XI : Visual Programming		4	3	25	75	100	4
	Paper XII : Java Programming		4	3	25	75	100	4
	Paper XIII : Analysis & Design of Information Systems		4	3	25	75	100	3
	Paper XIV: Computer Networks		4	3	25	75	100	3
	Paper XV : Operations Research		4	3	25	75	100	3
	Practical V : Visual Programming Lab		5	3	40	60	100	4
	Practical VI : Java Programming Lab		5	3	40	60	100	4
IV	Paper XVI : .NET Programming		4	3	25	75	100	4

	Paper XVII : Computer Graphics and Multimedia	4	3	25	75	100	4
	Paper XVIII : Software Engineering	4	3	25	75	100	3
	Paper XIX : Elective – I	4	3	25	75	100	3
	Paper XX : Elective – II	4	3	25	75	100	3
	Practical VII : .NET programming Lab	5	3	40	60	100	4
	Practical VIII : Graphics and Multimedia Lab	5	3	40	60	100	4
V	Paper XXI : Software Testing	4	3	25	75	100	4
	Paper XXII : Network Security and Cryptography	4	3	25	75	100	3
	Paper XXIII : Data Mining and Warehousing	4	3	25	75	100	3
	Paper XIV : Elective – III	4	3	25	75	100	3
	Paper XXV : Elective – IV	4	3	25	75	100	3
	Practical IX : Mini Project	5	-	-	-	100*	5
	Practical X : Software Testing Lab	5	3	40	60	100	4
VI	Project work and Viva voce					200**	10
	Total					**3700**	**135**

*   Project report - 80 marks; Viva-voce – 20 marks
** Project report - 160 marks; Viva-voce – 40 marks

ELECTIVE – I
E.1.1. Client Server Technology
E.1.2. Digital Image Processing
E.1.3. Open Source System

ELECTIVE – II
E.2.1. Mobile computing
E.2.2. Distributed Computing
E.2.3. Cloud Computing

ELECTIVE – III
E.3.1. Web Services
E.3.2. Middleware Technologies
E.3.3. Neural Networks

ELECTIVE – IV
E.4.1. E-Commerce
E.4.2. Embedded systems
E.4.3.   Information Retrieval Techniques

BHARATHIAR UNIVERSITY (CBSC PATTERN)
B. Sc. BIOCHEMISTRY DEGREE COURSE
For the students admitted during the academic year 2015– 2016 batch and onwards

SCHEME OF EXAMINATION - CBCS PATTERN

Part	Study Components	Course title	Ins. hrs/ week	Dur.Hrs	Examinations CIA	Marks	Total Marks	Credit
		Semester I						
I	Language – I		6	3	25	75	100	4
II	English – I		6	3	25	75	100	4
III	Core Paper I - Biomolecules		3	3	25	75	100	4
	Core Paper II - Cell Biology		3	3	25	75	100	4
	Core Biochemistry Practical – I		2	-	-	-	-	-
	Allied A : Paper I – Chemistry		6	3	20	55	75	4
	Allied Chemistry Practicals		2	3	-	-	-	-
IV	Environmental Studies #		2	3	-	50	50	2
		Semester II						
I	Language – II		6	3	25	75	100	4
II	English – II		6	3	25	75	100	4
III	Core Paper III - Biomedical Instrumentations		5	3	25	75	100	4
	Core Biochemistry Practical – I		3	3	40	60	100	4
	Allied A : Paper II - Chemistry		6	3	20	55	75	3
	Allied Practical – Chemistry		2	3	20	30	50	2
IV	Value Education – Human Rights #		2	3	-	50	50	2
		Semester III						
I	Language – III		6	3	25	75	100	4
II	English – III		6	3	25	75	100	4
III	Core Paper IV - Enzyme and Enzyme Technology		3	3	25	75	100	4
	Core Paper V – Microbiology		3	3	25	75	100	4
	Core Biochemistry Practical - II		2	-	-	-	-	-
	Allied B: Paper I – Basic Mathematics		6	3	20	55	75	3
IV	Skill based Subject I - Bioinformatics		2	3	20	55	75	3
	Tamil @ / Advanced Tamil# (OR) Non-major elective - I (Yoga for Human Excellence)# / Women's Rights#		2	3	50		50	2
		Semester IV						
I	Language – IV		6	3	25	75	100	4
II	English – IV		6	3	25	75	100	4
III	Core Paper IV – Intermediary Metabolism		4	3	25	75	100	4

	Core Biochemistry Practical – II		3	6	30	45	75	3
	Allied B : Paper II – Computer	4	3	20	55	75	3
	Practical – Computer	2	3	20	30	50	2
IV	Skill based Subject 2 - Basics of Information Technology	3	3	20	55	75	3
	Tamil @ /Advanced Tamil # (OR) Non-major elective -II (General Awareness #)	2	3	50		50	2
	Semester V						
III	Core Paper VII – Human Physiology	4	3	25	75	100	4
	Core Paper VIII – Clinical Biochemistry	4	3	25	75	100	4
	Core Paper IX – Molecular Biology	4	3	25	75	100	4
	Core Paper X – Genetic Engineering and Bioprocess Technology	3	3	25	75	100	4
	Biochemistry Practical – III	4	-	-	-	-	-
	Biochemistry Practical - IV	4	-	-	-	-	-
	Elective – I	4	3	20	55	75	3
IV	Skill based Subject 3 – Basics of Patent and Bioethics	3	3	20	55	75	3
	Semester VI						
III	Core Paper XI – Plant Biochemistry and Plant Therapeutics	4	3	25	75	100	4
	Core Paper XII – Medicinal Chemistry	4	3	25	75	100	4
	Biochemistry Practical – III	4	6	30	45	75	3
	Biochemistry Practical – IV	4	6	30	45	75	3
	Elective – II	4	3	20	55	75	3
	Elective – III	4	3	20	55	75	3
IV	Skill Based Subject 4 - Practical – Bioinformatics	6	6	30	45	75	3
V	Extension Activities @	-	-	50	-	50	2
	Total					3500	140

@ No University Examinations. Only Continuous Internal Assessment (CIA)
# No Continuous Internal Assessment (CIA). Only University Examinations.

List of Elective papers (Colleges can choose any one of the papers as electives)		
Elective - I	A	Immunology and Immunotechniques
	B	Introduction to Biomaterials
	C	Nutritional Biochemistry
Elective - II	A	Plant and Animal Biotechnology
	B	Nanomaterials and Nanomedicine
	C	Health and Hygiene
Elective - III	A	Diagnostic Biochemistry
	B	Sports Biochemistry
	C	Nanobiotechnology

Note :
The syllabus for the above papers (**except Core paper Cell Biology, Semester V - Skill based subject 3**) be same as prescribed for the academic year 2010-11. The syllabus for the **Core paper Cell Biology and Semester V - Skill based subject 3 –basics of Patent and Bioethics)** are furnished below.

BHARATHIAR UNIVERSITY, COIMBATORE.
M. Sc., BIOCHEMISTRY DEGREE COURSE

(AFFILIATED COLLEGES)

(Effective from the academic Year 2015-2016)

SCHEME OF EXAMINATIONS – CBCS PATTERN

SEM	Subject and Paper	Inst. Hrs/week	Examinations				Credit
			Dur.H	CIA	Marks	Total Marks	
I	Paper-I Biopolymers	5	3	25	75	100	4
	Paper-II Analytical Biochemistry and Bioinformatics	5	3	25	75	100	4
	Paper-III Enzymes and Enzyme Technology	4	3	25	75	100	4
	Paper-IV Cellular Biochemistry	4	3	25	75	100	4
	Paper-V Plant Biochemistry and Biotechnology	4	3	25	75	100	4
	Practical-I Core Biochemistry Practical-I	5	-	-	-	-	-
	Elective – Paper I	3	3	25	75	100	4
II	Paper-VI Microbial Biochemistry	5	3	25	75	100	4
	Paper-VII Immunology	5	3	25	75	100	4
	Paper-VIII Advanced Clinical Biochemistry	5	3	25	75	100	4
	Paper-IX Molecular Biology	5	3	25	75	100	4
	Practical-I Core Biochemistry Practical-I	5	6	40	60	100	4
	Elective – Paper II	5	3	25	75	100	4
III	Paper-X Biostatistics and Research Methodology	5	3	25	75	100	4
	Paper-XI Metabolism and Metabolic Regulation	4	3	25	75	100	4
	Paper-XII Genetic Engineering	5	3	25	75	100	4
	Paper-XIII Endocrinology	4	3	25	75	100	4
	Paper-XIV Pharmaceutical Chemistry and Neurochemistry	5	3	25	75	100	4
	Practical –II Core Biochemistry Practical-II	4	-	-	-	-	-

Elective Paper III	3	3	25	75	100	4
IV Practical-II Core Biochemistry Practical-II	5	6	40	60	100	4
Project Work	20	6	100	150	250*	10
Elective – Practical/ Project	5	6	40	60	100*	4
Total					2250	90

*   For Project report - 80%; Viva-voce - 20% [Assessment of Internal marks should be based on Monthly assessment and report by the concerned guide and HOD]

* Includes 25 / 40% continuous internal assessment marks for theory and practical papers respectively.

BHARATHIAR UNIVERSITY, COIMBATORE:641 046
B.Sc. MICROBIOLOGY DEGREE COURSE
SCHEME OF EXAMINATION - CBCS PATTERN (AFFILIATED COLLEGES)
(For the students admitted from the academic year 2015 – 2016 batch onwards)

Part	Study Components — Course title	Ins. hrs/ week	Dur.Hrs.	CIA	Marks	Total Marks	Credit
	Semester I						
I	Language – I	6	3	25	75	100	4
II	English – I	6	3	25	75	100	4
II	Core Paper I - Fundamentals of Microbiology	6	3	25	75	100	4
	Practical I and Viva Voce	4	-	-	-	-	-
	Allied A : Paper I – Biostatistics and Computer Applications I	4	3	20	55	75	3
	Allied Practical	2	-	-	-	-	-
IV	Environmental Studies #	2	-	-	50	50	2
	Semester II						
I	Language – II	6	3	25	75	100	4
II	English – II	6	3	25	75	100	4
III	Core Paper II - Bioinstrumentation − Principles and Applications	4	3	25	75	100	4
	Core Paper III - General Biology	3	3	25	75	100	4
	Core Practical I and Viva Voce	3	3	30	45	75	3
	Allied A : Paper II - Biostatistics and Computer Applications II	4	3	20	55	75	3
	Allied Practical	2	3	20	30	50	2
IV	Value Education – Human Rights #	2	3	-	50	50	2
	Semester III						
I	Language – III	6	3	25	75	100	4
II	English – III	6	3	25	75	100	4
III	Core Paper IV - Microbial Diversity	4	3	25	75	100	4
	Core Practical II	3	3	-	-	-	-
	Allied B: Paper I – Biochemistry I	4	3	20	55	75	3
	Allied Practical	2	-	-	-	-	-
IV	Skill based Subject I – Medical Laboratory Technology – Clinical Laboratory Technology	3	3	20	55	75	3
	Tamil @ / Advanced Tamil# (OR) Non-major elective - I (Yoga for Human Excellence) # / Women's Rights #	2	3	50		50	2

	Semester IV						
I	Language – IV	6	3	25	75	100	4
II	English – IV	6	3	25	75	100	4
III	Core Paper V –Microbial Physiology	4	3	25	75	100	4
	Core Practical – II	3	6	30	45	75	3
	Allied B : Paper II – Biochemistry II	4	3	20	55	75	3
	Allied Practical	2	3	20	30	50	2
IV	Skill based Subject 2 - Medical Laboratory Technology – Diagnostic Microbiology I (Bacteriology and Serology)	3	3	20	55	75	3
	Tamil @ /Advanced Tamil # (OR) Non-major elective -II (General Awareness #)	2	3	50		50	2
	Semester V						
III	Core Paper VI - Microbial Genetics	5	3	25	75	100	4
	Core Paper VII – Principles of Immunolgy	4	3	25	75	100	4
	Core Paper VIII– Food Microbiology	4	3	25	75	100	4
	Core Paper IX–Recombinant DNA Technology- I	4	3	25	75	100	4
	Elective 1	4	3	25	75	100	4
	Core Practical - III	6	3	-	-	-	-
IV	Skill based Subject 3 – Medical Laboratory Technology – Diagnostic Microbiology II (Virology and Mycology, Parasitology)	3	3	20	55	75	3
	Semester VI						
III	Core Paper X – Industrial Microbiology	4	3	25	75	100	4
	Core Paper XI – Environmental and Agricultural Microbiology	4	3	25	75	100	4
	Core Paper XII – Virology	4	3	25	75	100	4
	Core Practical – III	6	9	40	60	100	4
	Elective – II	4	3	25	75	100	4
	Elective – III	4	3	25	75	100	4
IV	Skill Based Subject 4 - Diagnostic Microbiology – Practical	4	3	30	45	75	3
V	Extension Activities @	-	-	-	-	50	2
	Total					3500	140

Students should undergo an institutional training for a continuous period of 15 days before semester VI

@ No University Examinations. Only Continuous Internal Assessment (CIA)

No Continuous Internal Assessment (CIA). Only University Examinations.

List of Elective papers (Colleges can choose any one of the paper as electives)		
Elective – I	**A**	Medical Microbiology
	B	Entomology
	C	Applied Plant Biology
Elective – II	**A**	Recombinant DNA Technology - II
	B	Enterpreneurial Microbiology
	C	Bio-Molecules
Elective - III	**A**	Dairy Microbiology
	B	Medical Biochemistry
	C	Bionanotechnology

BHARATHIAR UNIVERSITY, COIMBTORE:641 046
M.Sc. MICROBIOLOGY
SCHEME OF EXAMINATION (CBCS PATTERN)
(For the students admitted during the academic year 2015-2016 Batch onwards)

Study Components	Course Title	Ins. hrs / week	Dur. Hrs.	CIA	Uni. exam	Total	Credit
Semester I							
Paper I	Fundamentals of Microbiology and Bioinformatics	5	3	25	75	100	4
Paper II	Microbial Physiology and Biochemistry	5	3	25	75	100	4
Paper III	Applied Biotechniques	5	3	25	75	100	4
Paper IV	Environmental and Agricultural Microbiology	5	3	25	75	100	4
Practical	Practical I	5	-	-	-	-	-
Elective	Paper I	5	3	25	75	100	4
Semester II							
Paper V	Molecular Genetics	5	3	25	75	100	4
Paper VI	Virology and Nanotechnology	5	3	25	75	100	4
Paper VII	Bioprocess Technology	5	3	25	75	100	4
Paper VIII	Engineering of Genes and Proteins	5	3	25	75	100	4
Practical	Practical I	-	9	40	60	100	4
Practical	Practical II	5	9	40	60	100	4
Elective	Paper II	5	3	25	75	100	4
Semester III							
Paper IX	Immunology and Immunotechnology	5	3	25	75	100	4
Paper X	Medical Microbiology	5	3	25	75	100	4
Paper XI	Biotechnology and IPR	5	3	25	75	100	4
Paper XII	Microbial Food Technology	5	3	25	75	100	4
Paper XIII	Biostatistics and Research Methodology	5	3	25	75	100	4
Practical	Practical III	5	-	-	-	-	-
Semester IV							
Elective	Paper III	5	3	25	75	100	4
Practical	Practical III	5	9	40	60	100	4
Project	Project and viva voce	-	-	-	-	200*	8
Training	Industrial training and viva voce @	-	-	50	-	50*	2
Elective	Paper IV -Practical	5	9	40	60	100	4
	Total					2250	90

* Project Report – 160 Marks, Viva voce- 40 Marks

* Students should undergo an institutional/industrial training relevant to any one of theory paper for a continuous period of 15 days before semester IV and submit report along with attendance certificate. Training Report – 40 Marks, Viva voce- 10 Marks.
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List of Group Elective papers (Colleges can choose any one of the Group papers as electives)

	GROUP A	GROUP B	GROUP C
Paper I/Sem I	Principles of Quality Assuarance	Environment and Health	Basic Biological Sciences
Paper II/Sem II	Quality Assessment in Pharmaceuticals	Communicable and Non-communicable diseases	Biophysics and Biochemistry
Paper III/Sem IV	Total Quality Management (TQM)	Health care of the community	Molecular Cytology and Tissue Engineering
Paper IV/Sem IV	Practical	Practical	Practical

Guidelines for the Project Work:

Two reviews to be conducted with all the students & staff members in the month of Jan. & Feb.
2nd review if necessary an external expert may be called.

BHARATHIAR UNIVERSITY, COIMBATORE-641 046
(For the students admitted from the academic year 2015-16 and onwards)

SCHEME OF EXAMINATIONS – CBCS   Pattern

B.B.A (Bachelor of Business Administration)

Part	Study Components	Course Title	Ins. Hrs / Week	Dur. Hrs.	CIA	Marks	Total Marks	Credits
				Examinations				
	SEMESTER –I							
I	Language-I		6	3	25	75	100	4
II	English-I		6	3	25	75	100	4
III	Core I – Management Process		5	3	25	75	100	4
III	Core II –Business Communication		5	3	20	55	75	3
III	Allied Paper I – Mathematics for Management-I		6	3	25	75	100	4
IV	Environmental Studies #		2	-	-	50	50	2
	SEMESTER –II							
I	Language-II		6	3	25	75	100	4
II	English-II		6	3	25	75	100	4
III	Core III – Organisational Behaviour		5	3	20	55	75	3
III	Core IV – Economics for Executives		6	3	25	75	100	4
III	Allied Paper II – Mathematics for Management-II		5	3	25	75	100	4
IV	Value Education – Human Rights #		2	-	-	50	50	2
	SEMESTER –III							
III	Core V – Financial Accounting		5	3	25	75	100	4
III	Core VI – Production and Material Management		5	3	25	75	100	4
III	Core VII – Marketing Management		5	3	25	75	100	4
III	Core VIII – Business Law		5	3	25	75	100	4
III	Allied : III - PC Software (Ms Office) – Practical		5	3	40	60	100	4
IV	Skill based Subject-1 : Communication Skills I ^		3	3	30	45	75	3
IV	Tamil @ /Advanced Tamil # (or) Non-major elective-I : Yoga for Human Excellence # / Women's Rights # Constitution of India #		2	-	50		50	2
	SEMESTER –IV							
III	Core IX - Human Resource Management		5	3	25	75	100	4
III	Core X – Cost & Management Accounting		5	3	25	75	100	4
III	Core XI – Advertising and Sales Promotion		5	3	25	75	100	4
III	Core XII –Management Information System		5	3	25	75	100	4
III	Allied : IV – Financial Accounting Package – Tally (Practical only)		5	3	40	60	100	4
IV	Skill based Subject-2 : Communication Skills II ^		3	3	30	45	75	3
IV	Tamil @ / Advanced Tamil # (or) Non-major elective-II : General Awareness #		2	-	50		50	2

B.B.A (Bachelor of Business Administration)

	SEMESTER –V						
III	Core XIII –Financial Management	6	3	25	75	100	4
III	Core XIV – Research Methods for Management	5	3	25	75	100	4
III	Core XV - Insurance Principles and Practice	5	3	25	75	100	4
III	Core XVI – Taxation Law and Practice	6	3	25	75	100	4
III	Elective –I :	5	3	25	75	100	4
IV	Skill based Subject –3 : Campus to Corporate ^	3	3	30	45	75	3
	SEMESTER –VI						
III	Core XVII – Entrepreneurship and Project Management	6	3	25	75	100	4
III	Core XVIII - Investment Management	6	3	25	75	100	4
III	Core XIX – Services Marketing	5	3	25	75	100	4
III	Elective –II :	5	3	25	75	100	4
III	Elective –III :	5	3	25	75	100	4
IV	Skill based Subject –4 : Soft Skills for Business ^	3	3	30	45	75	3
V	Extension Activities @	-	-	50	-	50	2
	TOTAL	-	-	-	-	**3500**	**140**

^ Refer the detailed note on this curricular aspect
$ Includes 25% / 40% continuous internal assessment marks for theory and practical papers respectively.
@ No University Examinations. Only Continuous Internal Assessment (CIA)
# No Continuous Internal Assessment (CIA). Only University Examinations.

List of Elective papers **(Colleges can choose any one of the paper as electives)**		
Elective – I	A	Portfolio Analysis and Management
	B	Modern Office Management
	C	Company Law and Secretarial Practice
	D	Customer Relationship Management
Elective – II	A	Banking Law and Practice
	B	Industrial Relations and Labour Laws
	C	Strategic Management
	D	Consumer Behaviour
Elective - III	A	Financial Services
	B	Project Work & Viva-Voce
	C	E-Commerce
	D	Global Business Management

Project Work & Viva-Voce

Project Work-50 Marks (25 Marks for Internal and 25 Marks for External) & Viva Voce-50
marks (External) : (25 marks for Internal Assessment & 75 marks for External Assessment)

B.B.A – C.A (Computer Applications)

Part	Study Components	Course Title	Ins. Hrs / Week	Dur.Hrs.	CIA	Marks	Total Marks	Credit
				Examination				
	SEMESTER –I							
I	Language-I		6	3	25	75	100	4
II	English-I		6	3	25	75	100	4
III	Core I – Management Process		5	3	25	75	100	4
III	Core II –Business Communication		5	3	20	55	75	3
III	Allied Paper I : Mathematics for Management –I		6	3	25	75	100	4
IV	Environmental Studies #		2	-	-	50	50	2
	SEMESTER –II							
I	Language-II		6	3	25	75	100	4
II	English-II		6	3	25	75	100	4
III	Core III – Organisational Behaviour		5	3	20	55	75	3
III	Core IV – PC Software (MS Office) - Practical		6	3	40	60	100	4
III	Allied Paper II : Mathematics for Management –II		5	3	25	75	100	4
IV	Value Education – Human Rights #		2	-	-	50	50	2
	SEMESTER –III							
III	Core V – Financial Accounting		5	3	25	75	100	4
III	Core VI – Production and Materials Management		5	3	25	75	100	4
III	Core VII – Marketing Management		5	3	25	75	100	4
III	Core VIII – Business Law		5	3	25	75	100	4
III	Allied Paper III : Financial Accounting Package -Tally (Practical only)		5	3	40	60	100	4
IV	Skill based Subject -1 : Communication Skills I ^		3	3	30	45	75	3
IV	Tamil @ /Advanced Tamil # (or) Non-major elective-I : Yoga for Human Excellence # / Women's Rights # Constitution of India #		2	3	50		50	2
	SEMESTER –IV							
III	Core IX – Human Resource Management		5	3	25	75	100	4
III	Core X – Cost & Management Accounting		5	3	25	75	100	4
III	Core XI – Advertising and Sales Promotion		5	3	25	75	100	4
III	Core XII –Internet and Web Page Design (Theory)		2	3	10	40	50	2
III	Core XIII –Internet Web Page Design Programming Laboratory (Practical)		3	3	20	30	50	2
III	Allied Paper IV : Management Information System		5	3	25	75	100	4
IV	Skill based Subject -2 : Communication Skills II ^		3	3	30	45	75	3
IV	Tamil @ / Advanced Tamil # (or) Non-major elective -II : General Awareness #		2	3	50		50	2

B.B.A – C.A (Computer Applications)

	SEMESTER –V						
III	Core XIV –Financial Management	6	3	25	75	100	4
III	Core XV – Research Methods for Management	5	3	25	75	100	4
III	Core XVI– Taxation Law and Practice	5	3	25	75	100	4
III	Core XVII–Visual Basic Theory	3	3	10	40	50	2
III	Core XVIII – Visual Basic & Oracle – Practical	3	3	20	30	50	2
III	Elective –I :	5	3	25	75	100	4
IV	Skill based Subject -3 : Campus to Corporate ^	3	3	30	45	75	3
	SEMESTER –VI						
III	Core XIX –Entrepreneurship & Project Management	6	3	25	75	100	4
III	Core XX –RDBMS & Oracle Programming	3	3	10	40	50	2
III	Core XXI –RDBMS & Oracle Programming - Practical	3	3	20	30	50	2
III	Core XXII – Services Marketing	5	3	25	75	100	4
III	Elective –II :	5	3	25	75	100	4
III	Elective –III :	5	3	25	75	100	4
IV	Skill based Subject -4 : Soft Skills for Business ^	3	3	30	45	75	3
V	Extension Activities @	-	-	50	-	50	2
	TOTAL	**-**	**-**	**-**	**-**	**3500**	**140**

^ Refer the detailed note on this curricular aspect

$ Includes 25% / 40% continuous internal assessment marks for theory and practical papers respectively.

 @ No University Examinations. Only Continuous Internal Assessment (CIA)

 # No Continuous Internal Assessment (CIA). Only University Examinations.

List of Elective papers **(Colleges can choose any one of the paper as electives)**		
Elective – I	**A**	Insurance Principles and Practice
	B	Modern Office Management
	C	Software Design Technique
	D	Customer Relationship Management
Elective – II	**A**	Strategic Management
	B	Industrial Relations and Labour Laws
	C	Systems Analysis and Design
	D	Consumer Behaviour
Elective - III	**A**	Financial Services
	B	Project Work & Viva-Voce
	C	E -Commerce
	D	Multimedia

Project Work & Viva-Voce
Project Work-50 Marks (25 Marks for Internal and 25 Marks for External) & Viva Voce-50
marks (External) : (25 marks for Internal Assessment & 75 marks for External Assessment)