

BHARATHIAR UNIVERSITY, COIMBATORE-641 046

B.Sc. PHYSICS DEGREE COURSE (Colleges)

SCHEME OF EXAMINATIONS (MODIFIED) (CBCS PATTERN)

(For the students admitted from the academic year 2016-2017 and onwards)

Part	Study Components	Course Title	Ins. hrs / week	Examinations				Credit
				Dur.Hr	CIA	Marks	Total Marks	
Semester I								
I	Language-I		6	3	25	75	100	4
II	English-I		6	3	25	75	100	4
III	Core I – Mechanics, Properties of Matter and Sound		6	3	25	75	100	4
III	Practical I		3	-	-	-	-	-
III	Allied A - Mathematical Paper I * (or) Chemistry Theory I **		7	3	25	75	100	4
			4	3	20	55	75	3
III	Allied Practical**		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 II – Heat and Thermo Dynamics		6	3	25	75	100	4
III	Practical I		3	3	40	60	100	4
III	Allied A - Mathematical Paper II * (or) Chemistry Theory II **		7	3	25	75	100	4
			4	3	20	55	75	3
III	Allied Practical**		3	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 III – Optics		4	3	25	75	100	4
III	Practical II		2	-	-	-	-	-
III	Allied B - Mathematical Paper I * (or) Chemistry Theory I **		7	3	25	75	100	4
			4	3	20	55	75	3
III	Allied Practical**		3	-	-	-	-	-
IV	Skill Based Subject – Office Automation		3	3	20	55	75	3
IV	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 IV – Atomic Physics and Spectroscopy		4	3	25	75	100	4
II	Practical II		2	3	40	60	100	4
III	Allied A - Mathematical Paper II * (or)		7	3	25	75	100	4

Part	Study Components	Course Title	Ins. hrs / week	Examinations			Credit	
				Dur.Hr	CIA	Marks		Total Marks
		Chemistry Theory II **	4	3	20	55	75	3
III	Allied Practical**		3	3	20	30	50	2
IV	Skill based Subject - Instrumentation II		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 V – Mathematical Physics		4	3	25	75	100	4
III	Core VI – Electronics		4	3	25	75	100	4
III	Core VII – Solid State Physics		4	3	25	75	100	4
III	Core VIII – Electricity and Magnetism		4	3	25	75	100	4
III	Practical III - Electronics Alone		2	-	-	-	-	-
III	Practical IV - Digital and Micro Processor		2	-	-	-	-	-
III	Elective –I		4	3	25	75	100	4
	Practical - C and C++		3	-	-	-	-	-
IV	Skill based Subject - Instrumentation III		3	3	20	55	75	3
Semester VI								
III	Core IX – Quantum Mechanics and Relativity		6	3	25	75	100	4
III	Core X - Nuclear Physics		5	3	25	75	100	4
III	Practical III - Electronics Alone		2	3	30	45	75	3
	Practical IV - Digital and Micro Processor		2	3	30	45	75	3
III	Elective –II		4	3	25	75	100	4
III	Elective –III		5	3	25	75	100	4
III	Practical V - C and C++		3	3	40	60	100	4
IV	Skill based Subjects Practical		3	3	30	45	75	3
V	Extension Activities @		-	-	-	-	50	2
Total							3500	140

* For subjects without practical ** For subjects with Practical

@ 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	Principles of Programming Concepts and C Programming
	B	Energy Physics
	C	Agricultural Physics
Elective – II	A	Micro Processors
	B	Optical Fibers and Fiber Optic Communication Systems
	C	Bio-Physics
Elective - III	A	Object Oriented Programming with C++
	B	Geo Physics

Note : The Syllabus for the above papers (except Semester V Elective – I-A Principles of Programming Concepts and C Programming) be the same as prescribed for the academic year 2015-16. The syllabus for the Elective – I-A Principles of Programming Concepts and C Programming are furnished below:

SEMESTER V:ELECTIVE I - A **PRINCIPLES OF PROGRAMMING CONCEPTS AND C PROGRAMMING**

No. of credit hours : 4 hours per week

Subject Description This subject deals with the programming concepts of C language
Goal To learn about C programming with various features

Objectives

On successful completion of this subject the student should have.

Writing programming ability on scientific and mathematical problems

It is very useful to the students in many ways like their higher studies and research etc., because of its versatility.

UNIT I (12 hrs)

Introduction – character sets – constants – keywords – and identifiers – variables – variables – data types – declaration of variables – assigning values to variables – defining symbolic constants.

UNIT II (12 hrs)

Arithmetic operators – relational operators – logical operators – assignment operators – increment and decrement operators – conditional operators – special operators – arithmetic expression – evaluation of expression. – precedence of arithmetic operators –
- type conversion in expression – operator precedence and associativity – mathematical functions.

UNIT III (12 hrs)

Reading and writing character – formatted input and output – decision making : IF statement : Simple IF – IF ELSE – Nesting of IF.. ELSE – ELSE. IF Ladder – Switch Statement – operator – go to statement – while .. do while – For loop .

UNIT IV (12 hrs)

Arrays : Introduction – One dimensional array – declaration of array – Initiating one and two and multidimensional arrays – declaring and initializing string variables – reading strings from terminal – writing strings on the screen..

UNIT V (12 hrs)

Need for user defined functions – A multifunction program – The form of C Functions RETURN values and their Types-Calling a function- Call by Value- Call by Reference- Recursive Functions..

Text Book

1.“Programming in ANSI C” by E. Balagurusamy, 3rd Edition

Reference Book

2.Programming in C by Ashok N. Kamthane First Indian Print 2004, Pearson.