Annexure No.	31 U
SCAA Dated	29.02.2008

BHARATHIAR UNIVERSITY, COIMBATORE – 641 046
M. Sc INFORMATION TECHNOLOGY (Colleges) & M.C.A. (Univ Dept)

COMPULOSRY DIPLOMA PAPER I: Introduction to Open Source Tools
(for the candidates admitted during 2008-09 batch and onwards)

Number of Instruction Hours: 3   **Number of Credits: 4**

Subject Description   :This Course presents the introduction to the open source tools
Goals : To enable the students to learn the Introduction to Linux, Unix networking programming, PHP programming Basics, and Perl programming.
Objectives   :
 On successful completion of the course the students should have:
- Understood the Linux concept
- Understood the Unix networking programming
- Understood the PHP programming Basics
- Understood Perl programming

Contents
Unit 1:   Introduction to Linux – What every Linux users knows- The shell-The X windows system –Files and Directories.

Unit 2:   Viewing Text – Editing Text – Grammar and Reference – Analyzing text – Formatting Text.

Unit 3:   UNIX Network Programming-Introduction to TCP/IP: Introduction –The Transport Layer TCP and UDP.
        Elementary sockets: Sockets Introduction, Elementary TCP sockets – I/O multiplexing – Socket options

Unit 4:   PHP Programming Basics
        PHP - Introduction, PHP Basics: - Syntax- Variables- Controls and functions- passing information between pages -Strings. Arrays: - Using Arrays, Manipulating Arrays, Associative Arrays

Unit 5:   Perl Programming
        Perl - Introduction, Perl Basics: - Syntax, Variables, Strings, Numbers, Operators, Arrays: - Using Arrays, Manipulating Arrays, Associative Arrays, Chop, Length, and Sub string. Hashes, Arguments, Logic, Looping, Files, Pattern Matching, Environment Variables, Using cgi-lib for Forms.
        File Management PERL: - File Handling, Reading From Files, Appending Files, Writing to Files, File Checking, Reading Directories.
        Databases PERL: - DBI Module, DBI Connect, DBI Query, MySQL Module, MySQL Connect, MySQL SelectDB, MySQL Query.

REFERENCES
1. Linux CookBook 2nd Edition Michael Stutz , SPD Pvt.ltd 2004 edition.
2. Linux Ina Nutshell – A desktop Quick Reference – O'Reilly 5th Edition, Ellen sivever, Aarom weber,Stephen Figgins, Robers Love and Arnold Robbins
3. Unix Network programming –The Sockets networking API volume I –Third Edition-W.Richard stevens, Bill Fenner,, Andrew M Rudoff
4.   PHP 5 and MySQL Bibble Wiley Dream tech India Pvt.ltd 2006 Edition.
5.   Perl CookBook –Tom Christinasen & Nathan Torkington , O'Relliy ,SPD Pvt ltd,2006 Edition.

COMPULSORY DIPLOMA PAPER II: Introduction to Open Source Environment
(for the candidates admitted during 2008-09 batch and onwards)

Number of Instruction Hours: 3   **Number of Credits: 4**

Subject Description   :   This Course presents the Open Source   environment

Goals   : To enable the students to learn the Concepts OOP with PHP and Ruby on Rails

Objectives   :
 On successful completion of the course the students should have:
*   Understood the concepts OOP with PHP
*   Understood the concepts of PHP
*   Understood the concepts of Ruby on Rails

Contents

Unit 1:   OOP with PHP –Advanced Array functions-Sessions-cookies and HTTP

Unit 2:   String and regular Expression function –Files system and System function, -Mathematics - PEAR-Security-Apache Tricks.

Unit 3:   Exceptions and Error Handling-Debugging- style

Unit 4:   Ruby on Rails: How Ruby works - How Rails works Ruby – Informed Rails Development.

Unit 5:   Objects and variables –Organizing with classes – model and program organization

Reference Book
1. PHP 5 and MySQL Bible Wiley Dreamtech India Pvt.ltd 2006 Edition
2. Professional LAMP Linux, Apache,MySQL and PHPs Web Development Wiley dreamtech 2006 Edition
3   Ruby for Rails, David A Black Dream tech Press 2006