Deenbandhu Chhotu Ram University of Science & Technology, Murthal (Sonepat) SCHEME OF STUDIES & EXAMINATIONS B.Tech. 3rd YEAR (SEMESTER –VI) COMPUTER SCIENCE AND ENGINEERING Credit Based Scheme w.e.f. 2014-15

Sr. No	Course No.	Course Title	Teaching Schedule			Marks of class work	Examination Marks		Total	Credit	Duration of Exam
			L	T	P		Theory	practical			
1	HUM 302B	REPORT WRITING SKILLS (Common to all branches)	1	-	-	25	50	-	75	1	2
2	IT 302B	WEB TECHNOLOGIES (Common with IT)	3	1	-	25	75	-	100	4	3
3	CSE 304B	COMPILER DESIGN	3	1	-	25	75	-	100	4	3
4	CSE 306B	ADVANCED JAVA PROGRAMMING	3	1	-	25	75	-	100	4	3
5	CSE 308B	ARTIFICIAL INTELLIGENCE	3	1	-	25	75	-	100	4	3
6	CSE 310B	SOFTWARE ENGINEERING	3	1	-	25	75	-	100	4	3
7	CSE 312B	PROGRAMMING LANGUAGES	3	1	-	25	75	-	100	4	3
8	HUM 304B	ORAL PRESENTATION SKILLS	-	-	2	20	-	30	50	1	2
9	IT 322B	WEB TECHNOLOGIES LAB (Common with IT)	-	-	2	20	-	30	50	1	3
10	CSE 324B	COMPILER DESIGN LAB	-	-	2	20	-	30	50	1	3
11	CSE 326B	ADVANCED JAVA PROGRAMMING LAB	-	-	2	20	-	30	50	1	3
12	CSE 328B	ARTIFICIAL INTELLIGENCE LAB	-	-	2	20	-	30	50	1	3
13	GPCSE 302B	GENERAL PROFICIENCY AND ETHICS	1	-	-	-	-	75	75	2	3
Total			20	6	10	275	500	225	1000	32	

Note:

0 Every student has to participate in the sports activities. Minimum one hour is fixed for sports activities either in the morning or evening. Weightage of Sports is given in General Proficiency Syllabus.

1 The students will be allowed to use non-programmable scientific calculator. However, sharing/exchange of calculator is prohibited in the examination.

2 Electronics gadgets including Cellular phones are not allowed in the examination.

3 Each students has to undergo Professional Training of at least 4 weeks from the industry, institute, research lab, training center etc during summer vacation and its evaluation shall be carried out in the VII semester

HUM- 302 B REPORT WRITING SKILLS
B. Tech. Semester – VI (Common for all branches)

L	T	P	Credit		
1	-	--	1	Class Work	: 25 Marks
				Examination	: 50 Marks
				Total	: 75 Marks
				Duration of Examination	: 2 Hours

OBJECTIVE

The course aims at developing competence for report writing with a focus on its complex writing techniques and procedures.

COURSE CONTENT

UNIT I

Report Writing

Reports: meaning, their importance and types, Structure of reports, Formats of reports, Use of illustrations

UNIT II

Writing of Business and Technical Reports:

Preliminary steps and procedure of writing report, writing various types of reports on technical, business related topics

RECOMMENDED READING

Borowick, Jerome. N. *Technical Communication and its Applications*. New Delhi: PHI, 2000

Guffey, Mary Ellen. *Business Communication: Process & Product*. USA: South western College Publishing, 2000.

Kumar, Sanjay and Pushp Lata. *Communication Skills*. Delhi: OUP, 2011

SCHEME OF END SEMESTER EXAMINATION (MAJOR TEST) AND INSTRUCTIONS FOR THE EXAMINER

The duration of the exam will be 2 hours.

The Question Paper for this theory course shall have three questions in all covering both the units. All will be compulsory with internal choice.

Question no. 1 will be of 10 marks. The question may have two/three parts with enough internal choice, covering various components of both the Units.

Question no 2 with internal choice will be of 10 marks covering contents of the Unit I. It will be theoretical in nature.

Question no 3 will have two parts of 15 marks each. The student will be asked to write reports on business and technical subject/ issue covering contents of Unit II. The emphasis would be on testing the actual report writing on a given business and technical situation/ subject in letter format.

IT 302B WEB TECHNOLOGIES

B. Tech. Semester – VI (Computer Science and Engg.)(Common with IT)

L	T	P	Credits			
3	1	--	4	Class Work	:	25 Marks
				Examination	:	75Marks
				Total	:	100 Marks
				Duration of Examination	:	3 Hours

Unit-1:

Introduction to the Internet, The world wide web: The idea of hypertext and hyper media; How the web works-HTTP, HTML and URLs; How the browser works-MIME types, plugins and helper applications; The standards-HTML, XML, XHTML and the W3C.

Hypertext markup language: The anatomy of an HTML document; Marking up for structure and style: basic page markup, absolute and relative links, ordered and unordered lists, embedding images and controlling appearance, table creation and use, frames, nesting and targeting.

Descriptive markup: Meta tags for common tasks, semantic tags for aiding search, the doubling code and RDF.

Unit-2:

Separating style from structure with style sheets: Internal style specifications within HTML, External linked style specification using CSS, page and site design considerations.

Client side programming: Introduction to the JavaScript syntax, the JavaScript object model, Event handling, Output in JavaScript, Forms handling, miscellaneous topics such as cookies, hidden fields, and images; Applications.

Unit-3:

Server side programming: Introduction to Server Side Technologies CGI/ASP/JSP., Programming languages for server Side Scripting, Configuring the server to support CGI, applications; Input/ output operations on the WWW, Forms processing, (using PERL/VBSCRIPT/JavaSCIPT)

Unit-4:

Other dynamic content technologies: introduction to ASP & JSP, Delivering multimedia over web pages, The VRML idea, The Java phenomenon-applets and servelets, issues and web development. Introduction to Microsoft .NET Technology and its comparison with the competing Technologies.

TEXT BOOKS:-

Beginning XHTML by Frank Boumpery, Cassandra Greer, Dave Raggett, Jenny Raggett, Sebastian Schnitzenbaumer& ted Wugofski, 2000, WROX press (Indian Shroff Publ. SPD) 1st edition

Web Technologies By Achyut S Godbole ,AtulKahate, 2003, T.M.H

REFERENCE BOOKS:-

HTML &XHTML:The Definitive Guide by Chuck Musciano, Bill Kennedy, 2000, 4th Edi.

XHTML Black Book by Steven Holzner, 2000

CGI Programming on the World Wide Web. O'Reilly Associates.

Scott Guelich, ShishirGundararam, Gunther Birzniek; CGI Programing with Perl 2/e O'Reilly.

Doug Tidwell, James Snell, PavelKulchenko; Programming Web services, O'Reilly.

Intranets by James D.Cimino, 1997, Jaico Publ.

Internet and Web Technologies – Raj Kamal, 2002, T.M.H

Note:

In the semester examination, the examiner will set two questions from each unit (total 08 questions in all), covering the entire syllabus. The students will be required to attempt only 5 questions selecting at least one question from each unit.

CSE-304-B COMPILER DESIGN
B.TECH. VI SEMESTER (COMPUTER SCIENECE & ENGINEERING)

L	T	P	Credits
3	1		4

Class Work : 25 Marks
Exam. : 75 Marks
Total : 100 Marks
Duration of Exam : 3 hrs.

Unit–1: Introduction: Compilers and translators, need of translators, structure of compiler: its different phases, Compiler construction tools.
Lexical Analysis: Role of lexical analyzer; Design of lexical analyzer; Regular expressions ;Specification and recognition of tokens; Input buffering; Finite automata; Conversion from regular expression to finite automata, and vice versa; Minimizing the number of states of DFA, Implementation of lexical analyzer.

Unit–2: Syntactic Techniques & Parsing: Context free Grammars; Derivations & parse trees; Capabilities of CFGs;
Role of parsers, Shift- Reduce Parsing ; Operator precedence parsing; top down parsing; predictive parsing, LR parsers; LR(0) items SLR, LALR and Canonical LR parser.

Unit–3: Syntax Directed Translation , Symbol Table & Error Handling : Syntax directed definition, construction of syntax trees, syntax directed translation scheme, implementation of syntax directed translation, Intermediate Code ;Parse trees & Syntax trees; Three address code, quadruples and triples; Translation of Boolean Expressions.
Symbol tables, its contents and data structure for symbol tables; trees, arrays, linked lists, hash tables ;Operations on symbol table;
Errors(lexical phase error, syntactic phase error, semantic error).

Unit–4:- Code Optimization & Code Generation: Sources of code optimization; Loop optimization (Denominators, Reducible flow graphs, depth first search, loop invariant computation, Induction variable elimination) ; Directed acyclic representation of basic blocks
Code generation, forms of objects code, machine dependent code, register allocation for temporary and user defined variables; Problems in code generation; Peephole optimization

TEXT BOOKS:

Compilers Principle, Techniques & Tools - Alfread V. AHO, Ravi Sethi& J.D. Ullman; - 1998Addison Wesley.

REFERENCE BOOKS:

Theory and practice of compiler writing, Tremblay & Sorenson, 1985, Mc. Graw Hill.
System Software by Dhamdhare, 1986, MGH.
Principles of Compiler Design, Alfred V Aho , Jeffery D. Ullman , Narosa Publication

Note:
In the semester examination, the examiner will set two questions from each unit (total 08 questions in all), covering the entire syllabus. The students will be required to attempt only 5 questions selecting at least one question from each unit.

CSE 306B ADVANCED JAVA PROGRAMMING
B. Tech. Semester – VI (Computer Science and Engg.)

L	T	P	Credits			
				Class Work	:	25 Marks
4	1	--	4	Examination	:	75 Marks
				Total	:	100 Marks
				Duration of Examination	:	3 Hours

UNIT-I

Introduction: Concepts of Classes and Objects, Constructors, Inheritance, Function Overloading, Polymorphism, Packages and Interfaces, exception handling, file streams and their manipulation. AWT & Applet Programming

Design of User Interfaces: Swing, Japplet, Icons and Labels, Text Fields, Buttons, Jbutton Class, Check Box, Radio Buttons, The Container, Panel, Windows, and Frame Classes, Combo Box, Tabbed Panes, Scroll Panes, Trees, Tables, Custom Rendering of Jlist Cells.

UNIT-II

JDBC: JDBC Fundamentals, Establishing Connectivity and working with connection interface, working with statements, Creating and Executing SQL statements, working with Result Set Object & Result Set Meta Data.

Java Beans: Java Bean, Installing, Starting Bean Development Kit, Use of JAR files and the use of Java Beans API.

UNIT-III

Servlets: Introduction to Servlets, Life cycle of Servlets, Creating, Compiling and running servlet, Reading the servlet Parameters, Reading Initialization parameter, Packages-javax.servletPackage, Handling HTTP Request and Response (GET / POST Request), Cookies and Session Tracking.

UNIT-IV

JSP: JSP Architecture, JSP Access Mode, JSP Syntax Basic (Directions, Declarations, Expression, Scriplets and Comments, JSP Implicit Object, Object Scope, Synchronization Issue, Session Management.

Text Books:

Gary Cornell and Horstmann Cay S., Core Java, Vol I and Vol II, Sun Microsystems Press.
Herbert Schildt, Java: The Complete Reference, McGraw-Hill.

Reference Books:

Philip Hanna, JSP: The Complete Reference, McGraw-Hill.
Deital and Deital, Java How to Program, Prentice Hall (2007).

Note:

In the semester examination, the examiner will set two questions from each unit (total 08 questions in all), covering the entire syllabus. The students will be required to attempt only 5 questions selecting at least one question from each unit.

CSE 308B ARTIFICIAL INTELLIGENCE
B. Tech. Semester – VI (Computer Science and Engg.)

L	T	P	Credits			
3	1	--	4	Class Work	:	25 Marks
				Examination	:	75Marks
				Total	:	100 Marks
				Duration of Examination	:	3 Hours

Unit-I

Basic of AI :- Foundation and history of AI, Ai problems and techniques – AI programming languages, introduction to LISP and PROLOG- problem spaces and searches, blind search strategies, Breadth first- Depth first- heuristic search techniques Hill climbing: best first- A * algorithm AO* algorithm- game tree, Min max algorithms, game playing- alpha beta pruning.

Unit-II:-

Knowledge representation issues, predicate logic- logic programming, semantic nets-frames and inheritance, constraint propagation, representing knowledge using rules, rules based deduction systems.

Unit-III

Reasoning under uncertainty, review of probability, Baye's probabilistic interferences and Dempster shafer theory, Heuristic methods, symbolic reasoning under uncertainty, Statistical reasoning, Fuzzy reasoning, Temporal reasoning, Non monotonic reasoning.

Unit-IV

Principles of Natural language processing, rule based systems architecture, Expert systems, knowledge acquisition concepts, Al application to robotics, and current trends in intelligent systems.

TEXT BOOK:

Artificial Intelligence: A Modern Approach,. Russell & Norvig. 1995, Prentice Hall.

REFERENCE BOOKS:

Artificial Intelligence, Elain Rich and Kevin Knight, 1991, TMH.

Artificial Intelligence-A modern approach, Staurt Russel and peter norvig, 1998, PHI.

Artificial intelligence, Patrick Henry Winston:, 1992, Addition Wesley 3rd Ed.,

Note:

In the semester examination, the examiner will set two questions from each unit (total 08 questions in all), covering the entire syllabus. The students will be required to attempt only 5 questions selecting at least one question from each unit.

CSE 310B SOFTWARE ENGINEERING
B. Tech. Semester – VI (Computer Science and Engg.)

L	T	P	Credits			
3	1	--	4	Class Work	:	25 Marks
				Examination	:	75Marks
				Total	:	100 Marks
				Duration of Examination	:	3 Hours

UNIT-I

Introduction: Introduction to Software Engineering, importance of Software, The Software Evolution,
Software Characteristics, Software Applications, Software Crisis: Problem and Causes. **Software Development Life Cycle:** Waterfall model, Incremental and Evolutionary process models, Personal Software process (PSP) and Team Software process (TSP), Overview of agile process and aspect oriented programming
Software Requirement Specification: Problem Analysis, Requirement elicitation and Validation, Requirements modeling: Scenarios, Information and analysis classes, flow and behavioral modeling, documenting Software Requirement Specification (SRS).

UNIT-II

System Design: Design Concepts, design models for architecture, component, data and user interfaces; Problem Partitioning, Abstraction, Cohesiveness, Coupling, Top Down and Bottom Up design approaches; Functional Versus Object Oriented Approach, Design Specification, 4GL. **Coding:** TOP-DOWN and BOTTOM-UP structure programming, Information Hiding, Programming Style, and Internal Documentation, Verification.

UNIT-III

Software Testing: Levels of Testing, Functional Testing, Structural Testing, Test Plan, Test Case Specification, Software Testing Strategies, Verification & Validation, Unit, Integration Testing, Top Down and Bottom Up Integration Testing, Alpha & Beta Testing, White box and black box testing techniques, System Testing and Debugging.
Software Quality Assurance: Software Configuration Management, Overview of Software Quality Control and Quality Assurance, ISO 9000 Certification for Software Industry, SEI Capability Maturity Model (CMM) and Comparison between ISO & SEI CMM.

UNIT-IV

Technical Metrics for Software: A Framework for Technical Software Metrics, Metrics for the Analysis Model, Metrics for Design Model, Metrics for Source Code, Metrics for Testing, Metrics for Maintenance.
CASE (Computer Aided Software Engineering): CASE and its Scope, CASE support in Software Life Cycle, Documentation Support, Architecture of CASE Environment. Exposure to CASE tools like Rational Software suit, Turbo Analyst, SilkSuite etc.

Text Books:

1. Roger S. Pressman, Software Engineering, A Practitioner's Approach, McGraw HillInternational Edition (2009) 7th edition.

Ian Sommerville, Software Engineering, Addison-Wesley Publishing Company, (2006) 8th ed.

KK Aggarwal, Yogesh Singh, Software Engineering,(2012), 3rd Edition, New Age International.

Reference books:

James F. Peter, Software Engineering - An Engineering Approach, John Wiley (2004).
Pankaj Jalote, An integrated Approach to Software Engineering, Narosa (2005).

Note:

In the semester examination, the examiner will set two questions from each unit (total 08 questions in all), covering the entire syllabus. The students will be

required to attempt only 5 questions selecting at least one question from each unit.

CSE 312B PROGRAMMING LANGUAGES
B. Tech. Semester – VI (Computer Science and Engg.)

L	T	P	Credits			
3	1	--	4	Class Work	:	25 Marks
				Examination	:	75Marks
				Total	:	100 Marks
				Duration of Examination	:	3 Hours

Unit-I

Introduction: Syntactic and semantic rules of a Programming language, Characteristics of a good programming language, Programming language translators compiler & interpreters , Virtual Computers & Binding times; Introduction to procedural, non-procedural ,structured, functional and object oriented programming language, Comparison of C & C++ programming languages.

Unit-II

Elementary & Structured Data Types : Elementary data types – data objects, variable & constants, data types, Specification & implementation of elementary data types, Declarations ,type checking & type conversions , Assignment & initialization, Numeric data types, enumerations, Booleans & characters

Structured data types& data Objects , specification & implementation of structured data types, Declaration & type checking of data structure ,vector & arrays, records Character strings, variable size data structures , Union, pointer & programmer defined data objects, sets, files.

Unit–III

Sequence Control& Data Control: Implicit & explicit sequence control ,sequence control within expressions, sequence control within statement, Subprogram sequence control: simple call return ,recursive subprograms, Exception & exception handlers, co routines, sequence control .

Data Control:-Names & referencing environment, static & dynamic scope, block structure, Local data

local referencing environment, Shared data (dynamic & static scope) ; Parameters& parameter transmission schemes.

Unit-IV

Storage Management& other features: Major run time elements requiring storage ,programmer and system controlled storage management & phases , Static storage management , Stack based storage management, Heap storage management ,variable & fixed size elements.

Evolution of data type concept, abstraction, encapsulation & information hiding , Subprograms ,type definitions, abstract data types

TEXT BOOKS:

Programming languages Design & implementation by T.W. .Pratt, 1996, Prentice Hall Pub.

Programming Languages – Principles and Paradigms by Allen Tucker & Robert Noonan, 2002, TMH.

REFERENCE BOOKS:

Fundamentals of Programming languages by Ellis Horowitz, 1984, Galgotia publications (Springer Verlag),

Programming languages concepts by C. Ghezzi, 1989, Wiley Publications.

Programming Languages – Principles and Pradigms, Allen Tucker, Robert Noonan 2002, T.M.H.

Note:

In the semester examination, the examiner will set two questions from each unit (total 08 questions in all), covering the entire syllabus. The students will be required to attempt only 5 questions selecting at least one question from each unit.

HUM- 304 B ORAL PRESENTATION SKILLS
B. Tech. Semester – VI (Common for all branches)

L	T	P	Credits			
				Class Work	**:**	**20 Marks**
--	**--**	**2**	**1**	**Examination**	**:**	**30 Marks**
				Total	**:**	**50 Marks**
				Duration of Examination	**:**	**2 Hours**

OBJECTIVE
To enable students to develop their speaking skills with professional proficiency

COURSE CONTENT

Oral Presentations:
Group Discussion; Mock interviews

Note for the Teacher:
The teacher concerned, by devising her/his method, must preview and review the student's spoken proficiency at the beginning and end of the semester respectively to find the efficacy of the course and degree of improvement in the student.

RECOMMENDED READING

Konar, Nira. *English Language Laboratories: A Comprehensive Manual*. Delhi: PHI, 2011

Kumar, Sanjay and Pushp Lata. *Communication Skills*. Delhi: OUP, 2011

SCHEME OF END SEMESTER EXAMINATION (Practical)

An external Practical exam of 30 marks of 2 hour duration for the course will be conducted by an external examiner appointed by the competent authority of the University's.

NOTE: **Students will be tested for their oral communication competence making them participate in Group discussion, mock situations for interview. Students may also be evaluated through a viva conducted by an external examiner.**

IT **322B WEB TECHNOLOGIES LAB**

B. Tech. Semester – VI (Computer Science and Engg. (Common with IT)

L	T	P	Credits		
		2	1	**Class Work**	**: 20 Marks**
				Examination	**: 30Marks**
				Total	**: 50 Marks**
				Duration of Examination	**: 3 Hours**

A Simple HTML home page provide links to move to other pages like hobbies, educational info, personal info etc.

A HTML program to illustrate the use of frame and frameset tags of HTML.

A HTML Program which use a HTML controls to create a student information form to collect student's information like name, address, phone, email, sex, birth date, hobbies etc. Download

A HTML Program which demonstrates loops like for loop, do while, while in java script.

A HTML Program which demonstrates the use of functions in java script.

A HTML Program which demonstrates various events like onclick, ondbclick, onfocus, onblur, onchange, onmouseover, onmouseover, window event, onload, onunload event.

A HTML Program to create various functions and sub routines to validate the data entered by
user in form. Download

Create a program to illustrate the concept of associative array in PHP.

Create PHP program to implement the concept of Session management.

Create a PHP program to display student information in webpage. Student's data is stored in My SQL database.

Create a PHP program to insert student information from HTML form. Student's data is stored in My SQL database.

Note: More exercises based on IT 302B may be given by the teacher

CSE 324B COMPILER DESIGN LAB
B. Tech Semester – VI (Computer Sc. & Engg.)

L	T	P	Credits			
				Class Work	**:**	**20 Marks**
		2	**1**	**Examination**	**:**	**30Marks**
				Total	**:**	**50 Marks**
				Duration of Examination	**:**	**3 Hours**

Practice of LEX/YACC of compiler writing.
Write a program to check whether a string belong to the grammar or not.
Write a program to generate a parse tree.
Write a program to find leading terminals.
Write a program to find trailing terminals.
Write a program to compute FIRST of non-terminal.
Write a program to compute FOLLOW of non-terminal.
Write a program to check whether a grammar is left Recursion and remove left Recursion.
Write a program to remove left factoring.
Write a program to check whether a grammar is operator precedent.
To show all the operations of a stack.
To show various operations i.e. red, write and modify in a text file.

Note : At least 10 programs are required to be developed in the semester.

CSE 326B ADVANCED JAVA PROGRAMMING LAB
B. Tech Semester – VI (Computer Sc. & Engg.)

L	T	P	Credits		
		2	1	**Class Work**	**: 20 Marks**
				Examination	**: 30Marks**
				Total	**: 50 Marks**
				Duration of Examination	**: 3 Hours**

Write a program in Java for illustrating overloading, over riding and various forms of inheritance.

Write programs to create packages and multiple threads in Java.

Write programs in Java for event handling Mouse and Keyboard events.

Using Layout Manger create different applications.

Write programs in Java to create and manipulate Text Area, Canvas, Scroll Bars, Frames, and menus using swing/AWT.

Using Java create Applets.

Using Java language for Client Server Interaction with stream socket connections.

Write a program in Java to read data from disk file.

CSE 328B ARTIFICIAL INTELLIGENCE LAB

B. Tech Semester – VI (Computer Sc. & Engg.)

L	T	P	Credits			
				Class Work	**:**	**20 Marks**
		2	**1**	**Examination**	**:**	**30Marks**
				Total	**:**	**50 Marks**
				Duration of Examination	**:**	**3 Hours**

---

1. Study of PROLOG.

Write the following programs using PROLOG:

Write a program to solve 8 queens problem.

Solve any problem using depth first search.

Solve any problem using best first search.

Solve 8-puzzle problem using best first search

Solve Robot (traversal) problem using means End Analysis.

Solve traveling salesman problem.

Note: At least 5 more exercises to be given based on CSE 308B.

GPCSE 302B **GENERAL PROFICIENCY AND ETHICS**

B. Tech. Semester – VI (Computer Science and Engg.)

L	T	P	Credits	Examination		Total	
1	- -	- -			:	75	Marks
					:	75	Marks

The purpose of this course is to inculcate a sense of professionalism in a student along with personality development in terms of quality such as receiving, responding, temperament, attitude and outlook. The student efforts will be evaluated on the basis of his/ her performance / achievements in different walks of life.

A Faculty Counselor will be attached to a group of students which will remain associated with him /her during the entire period of the degree program in the University. Each faculty member will serve as a faculty counselor. They will act like a local guardian for the students associated with him / her and will help them in terms of career guidance, personal difficulties.

The student will present a written report before the committee with following in view:

The student will present before the committee his/her achievements during the current academic session in the form of a written report highlighting followings:

I.	Academic Performance	--------
II.	Extra Curricular Activities / Community Service, Hostel Activities	**(8 Marks)**
III	Technical Activities / Industrial, Educational tour	**(8 Marks)**
IV	Sports/games	**(14 Marks)**
V	Moral values & Ethics	**(15 Marks)**

NOTE: Report submitted by the students should be typed on both sides of the paper.

A student will support his/her achievement and verbal & communicative skill through presentation before the committee. **(30 Marks)**

Moral values & Ethics

Syllabus - A few topics from the below mentioned books

R.R.Gaur, R. Sangal and G.P. Bagaria, " Bagaria, " A foundation course in Human Values and Professional Ethics", Pub: Excel Books, New Delhi-110028.

M. Govindrajan, S Natrajan & V.S. Senthil Kumar, " Engineering Ethics (including Human Values)" Eastern Economy Edition, Prentics Hall of India Ltd.

A minor test/Quiz will be conducted during the semesterand It will be the duty of the concerned teacher assigned to teach Moral values & Ethics to submit the awards to respective chairman of the department / Director/Principal.

The evaluation of this course will be made by the following Committee.

University Departments:

1	Chairperson of the Department	Chairman
2	Senior Most Faculty Counselor	Member
3	Vice- Chancellor's Nominee	Member

Affiliated Colleges:

1	Director/Principal	Chairman

2	Head of the Department/Sr. Faculty	Member
3	External Examiner to be appointed by the University	Member

Note: Remuneration will be paid to the external examiner only (at par with the other practical examinations).