Syllabus for

B.Sc INFORMATION TECHNOLOGY

2015 – 2016 Batch

SREE SARASWATHI THYAGARAJA COLLEGE

Knowledge  Wisdom  Compassion

An Autonomous, NAAC Re-Accredited with 'A' Grade, ISO – 9001:2008 Certified Institution, Affiliated to Bharathiar University, Coimbatore, Approved by AICTE for MBA/MCA and by UGC for 2(f) & 12(B) status,

Thippampatti, Palani Road, Pollachi - 642 107, Coimbatore District, Tamil Nadu,

Tel.: 04259-266008, 266550, Tele Fax: 04259-266009,
Email: stc@stc.ac.in, Website: www.stc.ac.in
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1. SCHEME OF EXAMINATION AND SYLLABUS
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**Medium of Instruction:** English  
**Programme Code:** BITS

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<tr>
<td>C. Business Intelligence</td>
<td>BIT</td>
</tr>
<tr>
<td>D. Business Process Outsourcing</td>
<td>BIT</td>
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</table>

**EXPANSION FOR THE TITLES**

Spl: Z for compulsory one and A to X for alternatives (shall be indicated along with code connected by a hyphen mark)

Code: Code number for each of the course

Sem: I to X for first semester to last semester (Six for UG programs and four / six / ten for PG programs)

Part: I to V for UG programs and blank space for PG programs

Course: Title of the paper

Hours: Contact allocated for each course

Credits: Credit weightage allocated for each course and total for each program

Int: Maximum internal marks allocated for each course

Ext: Maximum external marks allocated for each course

Total: Maximum total marks allocated for each course
SEMESTER- I - ஆண்டு படத்தம்

Credits : 3
Course Code : N5BIT1T51
Part I Tamil I

Total Instructional hours - 75

(கல்விக்கலன், ரிசுக்காளன், தமிழ், டெக்னிகல் மற்றும், டெக்னாக்கான்(போட்டிக் வழி))

அதிகாணிக்கை

முன்னைப்பாண்டால் - காலத்தான் கதா
முன்னைக்காளன் - விளையாட்டு செயலாளர்
கல்விக்காளான் - குடும்ப கல்வியை கருது
அப்பாளால் - சுருக்கம் கல்வியை பார்க்க
சுருக்கக் குலன் - காட்சிகளில் புதுக்கிளிப்பிடு
தொடர்புபாள் - எழுத எச்செலுத்தி குடும்பம்
சின்னியால் - புதுக்கிளி பெண்ணிடு
முன்னைக்காளால் - கல்வியை கருது
அப்பாளால் - சுருக்கம் கருது
சுருக்கக் குலன் - புதுக்கிளி பெண்ணிடு

அதூ குறிப்பிட்டுக்கை

முன்னைப்பாண்டால் - காலத்தான் குடும்பக் கல்வியை பார்க்கவும்
க.அப்பாளால் - சுருக்கம் பார்க்க
அராயாளால் - தொடர்பு குறிப்பிட்டு
அப்பாளால் - சுருக்கம்
பொடிகாயில் - பெண்ணிடு
பள்ளி - நெடுஞ்சாடு
பரிமாள் பாடல் - கட்டுப்படுத்து
பகுதியில் - பல்லுயர் குறிப்பிட்டு

அதௌ துணைக்கை

முன்னைப்பாண்டால் - குறிப்பிட்டு

அதை முன்னையை

1. காலத்தான் குடும்பக் கல்வியை பார்க்கவும்
2. சுருக்கம் பார்க்கவும்
3. பல்லுயர் குறிப்பிட்டு குறிப்பிட்டு
பத்மகாதிசுருங்கம்

1. கருத்துற்ற குறிப்பிட்டுநிறைந்து சொல்லுங்களே?
2. வரலாற்றுச் சார்ந்த குறைவு பின்வருமாறு
3. சூடுகள் செய்வது தீர்மானம்
4. விளையாட்டுச் செயல்கள் பின்வருமாறு
5. குறிப்பிட்டுக்கொடுத்து

சார்ந்த குற்றங்களை குறிப்பிட்டு

பகுதிகள்

1. குறிப்பிட்டு பிரிவு - பத்மபதிகார்கள் காலத்தில் குறைவு பின்வருமாறு 2015 இல் புத்தகம்

2. குறிப்பிட்டு பிரிவு பிரிவு - பு.பிற்றுடன்

பகுதிகள்

1. குறிப்பிட்டுப் பகுதிகள்
- பத்மபதிகார்கள் காலத்தில் குறைவு பின்வருமாறு 2015 இல் புத்தகம் - 14.

2. புகழ்பெறும் பகுதிகள்
- பத்மபதிகார்கள் காலத்தில் குறைவு பின்வருமாறு 2015 இல் புத்தகம் - 14.

3. குறிப்பிட்டுப் பகுதிகள்
- குறைவு குழுநிலை அடைத்து

4. குறிப்பிட்டுப் பகுதிகள்
- குறைவு குழுநிலை

5. குறிப்பிட்டுப் பகுதிகள்
- குறைவு குழுநிலை காலத்தில்

- பத்மபதிகார்கள் காலத்தில் குறைவு பின்வருமாறு 9 இல் புத்தகம் - 61.
SEMESTER I
ENGLISH FOR ENRICHMENT-I

Credits: 3  Course Code: N5BIT1T52
Hours Per Week: 6  Total Instructional Hours: 75

Course Objective:
To expose students to the various facets of literature and thereby to enhance them in comprehending the efficiency of English language.

Skill Set To Be Acquired
On successful completion of the course, the students should have acquired.

- Language skills with literary appreciation and critical thinking.
- Comprehension Skill
- A flair for English language

Unit I
Credit Hours: 15
All The World’s A Stage- William Shakespeare-5
Our Present Generation- C.E.M. Joad-4
A Poison Tree- William Blake-3
Parts of speech and Sentence pattern

Unit II
Credit Hours: 15
I’m Getting Old- Robert Kroetsche
Mahatma Gandhi- V.S.Srinivasa Shastri
The Adventure of The German Student-Washington Irving
Voice

Unit III
Credit Hours: 16
Mending Wall-Robert Frost
The Last Leaf-O.Henry
A Noiseless Patient Spider- Walt Whitman
Narration

Unit IV
Credit Hours: 15
La Belle Dame Sans Merci-John Keats
A Dissertation Upon Roasted Pig-Charles Lamb
To An Unborn Pauper Child-Thomas Hardy
Tenses

Unit V
Credit Hours: 14
Refugee Mother And Child- Chinua Achebe
On Superstition- A.G. Gardiner
Some Curious Western Culture
Sparrows-K. Ahmad Abbas
Suggested Reading

SEMESTER – I
Core 1: INTRODUCTION TO INFORMATION TECHNOLOGY
Credits: 3
Course Code: N5BIT1T43
Total Instructional Hours: 50

OBJECTIVE: To teach the basic concepts of Information Technology such as Input devices, Output Devices, Memory, I/O devices, data processing in information technology.

SKILL SETS TO BE ACQUIRED: To impart thorough knowledge of the Memory, I/O devices and memory concepts.

UNIT – I

UNIT – II
Acquiring Image data: Introduction – Acquisition of Textual data – Acquisition of Pictures – Storage formats for pictures – Acquiring audio data: Basics of audio signals – Acquiring and storing audio signals – Acquisition of video: Introduction – Capturing a moving scene with a video camera.

UNIT-III

UNIT – IV

UNIT – V
TEXT BOOKS:

REFERENCE BOOKS:

Semester – I
ENVIRONMENTAL STUDIES
Credits: 2
Course Code:N5BIT1T93
Total Instructional Hours: 27

1.1. Definition, scope and importance
1.2. Need for public awareness
1.3. Natural resources
1.3.1. NATURAL RESOURCES AND ASSOCIATED PROBLEMS 6 Hours
   a. Forest resources: use and over-exploitation, deforestation, case studies. Timber extraction, mining, dams and their effects on forests and tribal people.
   b. Water resources: use and over-utilization of surface and ground water, floods, drought, conflicts over water, dams- benefits and problems
   c. Mineral resources: Use and exploitation, environmental effects of extracting and using mineral resources, case studies.
   d. Food resources: world food problems, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity, case studies.
   e. Energy resources: growing energy needs, renewable and non-renewable energy sources, use of alternate sources. Case studies.
   f. Land resources: land as a resource, land degradation, man induced landslides, soil erosion and desertification.
1.3.2. Role of an individual in conservation of natural resources.
1.3.3. Equitable use of resources for sustainable lifestyles.

2. ECOSYSTEMS 5 Hours
   2.1 Concept of an ecosystem.
   2.2 Structure and function of an ecosystem.
   2.3 Producers, consumers and decomposers.
   2.4 Energy flow in the ecosystem.
   2.5 Ecological succession.
   2.6 Food chains, food webs and ecological pyramids.
   2.7 Introduction, types, characteristic features, structure and function of the following
ecosystem:
   a. Forest ecosystem.
   b. Grassland ecosystem.
   c. Desert ecosystem.
   d. Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries)

3. BIODIVERSITY AND ITS CONSERVATION 5 Hours

3.1 Introduction – Definition: genetic, species and ecosystem diversity.
3.2 Biogeographical classification of India.
3.3 Value of biodiversity: consumptive use, productive use, social, ethical. Aesthetic and optionvalues
3.4 Biodiversity at global, National and local levels.
3.5 India as a mega-diversity nation.
3.6 Hot-spots of biodiversity.
3.7 Threats to biodiversity: habitat loss, poaching of wildlife man-wildlife conflicts.
3.8 Endangered and endemic species of India.
3.9 Conservation of biodiversity: In-situ and Ex-situ conservation of biodiversity.

4. ENVIRONMENTAL POLLUTION 5 Hours

4.1 Definition
   Causes, effects and control measures of: -
   Air pollution, Water pollution, Soil pollution, Noise pollution, Thermal pollution
4.2 Solid Waste Management: Causes, effects and control measures of urban and industrial wastes.
4.3 Role of an individual in Prevention of Pollution.
4.4 Pollution Case Studies.
4.5 Disaster Management: Floods, Earthquake, Cyclone and Landslides.

5. SOCIAL ISSUES AND THE ENVIRONMENT 6 Hours

5.1 Sustainable development
5.2 Urban problems related to energy.
5.3 Water conservation, rainwater harvesting, and watershed management.
5.4 Resettlement and rehabilitation of people; its problems and concerns. Case studies.
5.5 Environmental ethics: issues and possible solutions.
5.6 Climate change, global warming, ozone layer, depletion, acid rain, nuclear accidents and holocaust. Case studies
5.7 Consumerism and waste products.
5.8 Environmental protection Act.
5.9 Air (Prevention and Control of Pollution) Act.
5.10 Water (Prevention and Control of Pollution) Act.
5.11 Wildlife Protection Act.
5.12 Forest Conservation Act.
5.13 Issues involved in enforcement of environmental legislation.
5.14 Public awareness.
5.15 Human population and the environment.
   5.15.1 Population growth and distribution.
   5.15.2 Population explosion – Family Welfare Programme.
   5.15.3 Environment and human health.
   5.15.4 Human rights.
   5.15.5 Value Education.
   5.15.6 HIV/ AIDS
Semester I

ALLIED 1: NUMERICAL METHODS AND STATISTICS
B. Sc. CS \ B. Sc. CT \ B. Sc. IT \ B. C. A

Credits: 5  Hours per week: 5

Course Objective: To teach the students about probability, correlation, regression analysis and numerical techniques to solve non-linear differential equations and transcendental equation.

Skill sets to be acquired: After the completion of the course the student will be able to apply various methods of solving algebraic, transcendental equations, numerical differentiation, numerical integration, correlation and regression.

UNIT I (12 Hours)

UNIT II (12 Hours)

UNIT III (12 Hours)
Numerical Differentiation: Newton’s forward difference formula to compute derivatives - Newton’s backward difference formula to compute derivatives - derivatives using stirling’s formula - Numerical integration: Trapezoidal rule - Simpson’s 1/3 rule.

UNIT IV (12 Hours)
Interpolation: Newton’s forward and backward interpolation - Lagrange’s Formula.

UNIT V (12 Hours)
Correlation: Definition - Correlation co-efficient - Rank correlation.  Regression: Definition - Regression coefficients - Properties - Regression lines.

Text Books:

Reference Books:

Semester – I

Core 2: PROGRAMMING IN C

Credits: 3

OBJECTIVE: To understand the concepts of C.
SKILL SETS TO BE ACQUIRED: To enable the student to develop the Programming skill in C programming concepts.

UNIT – I  Hrs: 07


UNIT – II  Hrs: 11


UNIT – III  Hrs: 11


UNIT – IV  Hrs: 11


UNIT – V  Hrs: 10


TEXT BOOK:


REFERENCE BOOKS:


Semester – I

Core Lab 1: PROGRAMMING IN C LAB

Credits: 2  Course Code: N5BIT1P47
Total Instructional Hours: 35

1. Write a C program to find the biggest among three numbers.
2. Write a C program to check whether the given number is prime or not and display the n range of prime numbers.
3. Write a C program to find the sum of all digits until it reduces to a single digit.
4. Write a C program to create two array lists of integers. Sort and store the elements of both of them in the third list.
5. Write a C program to read two equal sized matrices and perform matrix addition and subtraction operations.
6. Write a C program to find length of a string, compare and concatenate two strings.
7. Write a C program to check whether the given string is palindrome or not
8. Write a C program to find factorial of given number using recursive function.
9. Write a C program to find sum, average and standard deviation using functions.
10. Write a C program to reverse a string using pointers.
11. Use structures to create and list Employee Details.
12. Write a C program to create the file with 5 records such as Book no, Book name, Author, Publisher, Price and display the items.
ஆண்டு III 2. வாகனம்

பரிச: 15

1. சலிசந்த சூழல் மற்றும் விளக்கம் - தின்மை.
2. பெங்கல் சூழல் - விளக்கம் (முதலாவது வருடம்)
3. மாற்றம் விளக்கம் - விளக்கம் (இரண்டாவது வருடம்)
4. வடிவச்சூழல் மற்றும் விளக்கம் - விளக்கம்
5. காற்று விளக்கம் - விளக்கம் (நான்காவது வருடம்)

ஆண்டு IV விளக்கம் வருடம்

பரிச: 15

1. நூறு விளக்கம் வகைகள்
2. தென்னில் விளக்கம் வகைகள் (விளக்கு வகைகள் பயன்பாடும் வகைகள்)
3. வடிவச்சூழல் வகைகள் பயன்பாடும் வகைகள்

ஆண்டு V விளக்கம்

குறிப்பிட்டு - நூறு விளக்கம் வகைகள் பத்தாண்டு வருடம்?

1. முதலாவது வருடம் - விளக்கம் (இரண்டாவது வருடம்)
2. இரண்டாவது வருடம் - விளக்கம் (நான்காவது வருடம்)
3. பத்தாண்டு வருடம் - விளக்கம்
4. வடிவச்சூழல் விளக்கம் - விளக்கம்
5. தொடர்ந்த விளக்கம் வகைகள் பயன்பாடும் வகைகள்

பாப் வருடம்

1. இரண்டாவது வருடம் - புது ஆண்டு தின்யூர்கள் கல்லூரியில் கல்வி முடிவு 2015 பதிப்பு
Course Objective:
To enable the students in understanding the intrinsic nuances of English language.

Skill Set To Be Acquired
On successful completion of the course, the students should have acquired.
• Improved Communication Skills
• Confidence to deal with real life situation.

Unit-I Credit Hours:15
- The Gift of Language – J.G. Bruton
- The Land where There were no old Men – Jean Ure
- Student Mobs – J.B. Priestly

Unit-II Credit Hours:15
- The Clerk of Oxford’s Tale from The Canterbury Tales - Geoffrey Chaucer.
- The Ancient Mariner – S.T. Coleridge
- The Song of Hiawatha – H.W. Longfellow

Unit-III Credit Hours:15
- Ode to a Nightingale – John keats
- The Stolen Boat Ride – William Wordsworth, Advice to a Girl – Thomas Champion

Unit-IV Credit Hours:15
- Kiran Bedi – Parmesh Dangwal
- Sorrows of Childhood – Charles Chaplin
- At School – M.K. Gandhi

Unit-V Credit Hours:15
- Letter Writing
- Precis Writing

Suggested Reading

Semester- II
Part -IV

Credits: 2  Course Code: N5BIT2T23
Total Instructional hours- 27

Students will be assessed based on their performance in the following activities:

Activity I (4 Hours)
- Assignments - English literature and culture - English language and literature - English language and literature
- English language and literature - English language and literature
- English language and literature - English language and literature

Activity II (6 Hours)
- Assignments - English literature and culture - English language and literature - English language and literature - English language and literature - English language and literature - English language and literature

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SEMESTER – II
Part - IV

Value Education And Human Rights

Credits: 2
Course Code: N5BIT2T23
Total Instructional Hours: 27

Objectives: To teach the students Ethics and values of life, train them to become spiritually oriented and transform them in to excellent citizens of the country.

UNIT I (4 Hours)
Education – Definition – Purpose of Education – Important values of life – Ethics and value Oriented Education – Importance of Science Education and its uses.

UNIT II (6 Hours)
Human relations – Excellence of human relations – Needs of the Society and problems – The duty and responsibility of the society – Art of complete living – Goals of Life and the methods to achieve them.

UNIT III (6 Hours)
Saints and their noble thoughts – Buddha, Mahaveer, Jesus Christ, Mohammed Nabi – Thruvalluvar, Ramalingar, Rama Krishnaparamahamsar, Swavi Vivekananda – Mahatma Gandhi.

UNIT IV (4 Hours)
Spirituality – Humanism – Quintessence or religions – Common aspects of all religions – Internationality of spiritualism.

UNIT V (7 Hours)

Medium of instruction : Tamil and English
Medium of Examination : Tamil and English
Reference

Semester II / IV
ALLIED 2: OPERATIONS RESEARCH
B. Sc. CT / B. Sc. IT / B. Sc(CS) / B.C.A / B.Com(CA) / B.B.M / B.Com / M.Sc SS
Course Code: N5BIT2T24

Credits: 5  Hours per week: 5
Total Instructional Hours: 60

Course Objective: To teach the students about the Industrial applications of Operations Research.

Skill sets to be acquired: After the completion of the course the students will be able to solve problems on LPP models, Transportation model, Assignment model, Queuing model, PERT & CPM Models, Decision theory models.

UNIT I  (12 Hours)

UNIT II  (12 Hours)

UNIT III  (12 Hours)
Queuing Theory: Introduction - Queuing system - Characteristics of queuing system - Kendall’s Notation - Classifications of queues - Problems in (M/M/1): (∞/FIFO); (Derivations not included)

UNIT IV  (12 Hours)
Game Theory: Introduction - Two person zero sum game - The Maximin - Minimax principle - saddle point - problems - Pure and Mixed games - Solution of 2 x 2 rectangular games - Graphical solution of (2 x n) and (m x 2) games.

UNIT V  (12 Hours)

Note: Problems - 80%, Theory - 20% (Derivations may be omitted for all units).

Text Book:

Reference Books:
OBJECTIVE: To inculcate knowledge on object oriented programming in C++ and algorithm aspects of data structure.

SKILL SETS TO BE ACQUIRED: To enable the students to acquire the knowledge on the basic concepts of OOPS and to develop Programs using C++ data structure.

UNIT-I Hrs: 09

Introduction to C++: Key concepts of OOP – Advantages of OOP. I/O in C++: unformatted and formatted console IO operations. C++ declarations: Parts of C++ program - Data types in C++ - Type casting - Constants - Operators in C++ - Precedence of Operators in C++.

UNIT-II Hrs: 11


UNIT-III Hrs: 10


UNIT-IV Hrs: 10


UNIT-V Hrs: 10


TEXT BOOK:

REFERENCE BOOKS:


UNIT – II

UNIT – III

UNIT – IV

UNIT – V

TEXT BOOK:

REFERENCE BOOKS:

Core Lab 2: C++ PROGRAMMING & DATA STRUCTURES LAB
Credits: 2 Course Code: N5BIT2P47
Total Instructional Hours: 35

1. Write a C++ program to create a class which consists of required variables with the suitable data types. Using class name create the Constructor and Destructor invoke them using object.
2. Write a C++ program using operator overloading.
3. Write a C++ program using the concept of overloading with friend function.
4. Write a C++ program to create a class name called A1 and derived the class with the name of A2. Create a Class A3 using the concept of multilevel inheritance.
5. Write a C++ program using pointers to object.
6. Write a C++ program to read a string, count the number of vowels and spaces in String.
7. Write a C program to experiment the operation of stack such as push() and pop().
8. Write a C program to experiment the queue operation such as insert(), delete() and display().
9. Write a C program to implement the concept of single linked list.
10. Write a C program to perform binary search.

Semester-III
Non-Major Electives 1: English for Competency - I

Credit: 2
Course Code: N5BIT3T31
Total Instructional hours: 27

Course Objective:
To prepare students for competitive examination and interviews

Unit I Grammar
Number - Subject - Verb Agreement - Articles - Sequence of tenses - Common Errors

Unit II Word Power
Idioms and phrases - One word substitutes - Synonyms - Antonyms - Words we often confuse - Spelling

Unit III
Reading and Reasoning

Unit IV Writing Skills
Paragraph - Précis writing - Expansion of an idea - Report writing - Essay - Letters - Reviews (Film and Book)

Unit V Speaking
Public speaking - Group Discussion - Interview - Spoken English

Suggested Reading
English for competitive Examination, V. Saraswathi and Maya K. Mudbhatkal, Emerald Publishers, 2004

Semester – III
ALLIED 3 : DISCRETE MATHEMATICS

Credits: 5
Course Code: N5BIT3T42
Total Instructional Hours: 75

Course Objective: To teach the students about the discrete structures of Mathematics.
Skill sets to be acquired: After the completion of the course the student will be able to understand the concepts of mathematical logic, relation, grammars.

UNIT I
Mathematical Logic – Introduction – TF Statements - Connectives - Negation, Conjunction, Disjunction, Conditional and Biconditional – Wellformed Formulas - Truth Table of Formulas -

UNIT II (15 Hours)
Relations: Properties of Binary Relations in a Set - Relation matrix and a Graph of a Relation - Equivalence Relations - Composition of Binary Relations.

UNIT III (15 Hours)
Functions: Definitions – Examples of Functions – Range of Functions – One to One, Onto, Into functions – Special types of functions, invertible functions – Composition of functions.

UNIT IV (15 Hours)

UNIT V (15 Hours)
Graph Theory: Graph – Definition – Digraph – Definition – Incidence and degree – Isomorphism of graphs – some special classes of graph – Paths, cycles, connectedness – theorems.

Text Book:

Reference Books:
1. Dr.A.Singaravelu, Dr.V.Ravichandran, Dr.T.N.Shanmugam, Discrete mathematics, Meenakshi agency 2008, 5th edition.

Semester – III
CORE 5: OPERATING SYSTEM
Credits: 5
Course Code: N5BIT3T43
Total Instructional Hours: 75

OBJECTIVE: To teach the various concepts and functions of the Operating System.
SKILL SETS TO BE ACQUIRED: To impart thorough knowledge about the management of Computer Resources such as Memory, CPU and I/O devices.

UNIT – I Hrs: 15

UNIT – II Hrs: 15

UNIT – III Hrs: 15

UNIT – IV Hrs: 15

UNIT – V

TEXT BOOK:

REFERENCE BOOKS:

Semester – III
Core 6: RELATIONAL DATABASE MANAGEMENT SYSTEM
Credits: 5 Course Code: N5BIT3T44
Total Instructional Hours: 75

OBJECTIVE: To understand the basic concepts in RDBMS such as Relational Models, E-R Models, SQL and Stored Procedures.

SKILL SETS TO BE ACQUIRED: To enable the students to gain knowledge in DBMS and RDBMS.

UNIT – I


UNIT – II


UNIT – III


UNIT – IV


UNIT – V

Triggers: Introduction – Use of Database Triggers – How to apply Database Triggers – Syntax for creating Triggers.

TEXT BOOKS:

REFERENCE BOOKS:

Semester – III
Core Lab 3: RDBMS LAB
Credits: 4
Course Code: N5BIT3P45
Total Instructional Hours: 75

1. Table Creation
Create client_master table where:

<table>
<thead>
<tr>
<th>Column Name</th>
<th>Data Type</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Client_no</td>
<td>Varchar2</td>
<td>6</td>
</tr>
<tr>
<td>Name</td>
<td>Varchar2</td>
<td>20</td>
</tr>
<tr>
<td>Address1</td>
<td>Varchar2</td>
<td>30</td>
</tr>
<tr>
<td>Address2</td>
<td>Varchar2</td>
<td>30</td>
</tr>
<tr>
<td>City</td>
<td>Varchar2</td>
<td>15</td>
</tr>
<tr>
<td>State</td>
<td>Varchar2</td>
<td>15</td>
</tr>
<tr>
<td>Pincode</td>
<td>Number</td>
<td>6</td>
</tr>
<tr>
<td>Remarks</td>
<td>Varchar2</td>
<td>60</td>
</tr>
<tr>
<td>Bal_due</td>
<td>Number</td>
<td>10.2</td>
</tr>
</tbody>
</table>

2. Update, Modify and Delete the structure of tables
a) Adding new column
b) Modifying existing columns
c) Deletion of a specified number of rows

3. Select Command Unique
a) Global data extract
b) The retrieval of specific columns from table
c) Elimination of duplicates from the select statement
d) Sorting of data in a table
e) Selecting a data set from table data

4. Constraints
a) Create table client_master with not NULL on column client_no, name, address1, address2.

<table>
<thead>
<tr>
<th>Column Name</th>
<th>Data Type</th>
<th>Size</th>
<th>Attributes</th>
</tr>
</thead>
<tbody>
<tr>
<td>S_order_no</td>
<td>Varchar2</td>
<td>6</td>
<td>Primary key</td>
</tr>
<tr>
<td>Product_no</td>
<td>Varchar2</td>
<td>6</td>
<td>Primary key</td>
</tr>
<tr>
<td>Qty_ordered</td>
<td>Number</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Qty_disp</td>
<td>Number</td>
<td>8</td>
<td></td>
</tr>
</tbody>
</table>
d) Create table client_master with Unique key on column client_no

e) Create client_master table where Unique key as a table constraint

f) Create table sales_order_details with primary key as s_order_no and Product_no and foreign key as s_order_no referencing column s_order_no in the sales_order table.

g) Create a sales_order_detail table where foreign key as a table constraint

h) Check integrity constraints:

i) CHECK with not null integrity constraints

j) Create a sales_order_details table where

<table>
<thead>
<tr>
<th>Column Name</th>
<th>Data Type</th>
<th>Size</th>
<th>Attributes</th>
</tr>
</thead>
<tbody>
<tr>
<td>S_order_no</td>
<td>Varchar2</td>
<td>6</td>
<td>Primary key, Foreign Key references s_order_no of sales_order table</td>
</tr>
<tr>
<td>Product_no</td>
<td>Varchar2</td>
<td>6</td>
<td>Primary key, Foreign Key references product_no of product_master table</td>
</tr>
<tr>
<td>Qty_ordered</td>
<td>Number</td>
<td>8</td>
<td>Not null</td>
</tr>
<tr>
<td>Qty_disp</td>
<td>Number</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Product_rate</td>
<td>Number</td>
<td>8.2</td>
<td>Not null</td>
</tr>
</tbody>
</table>

5. **Defining Integrity constraints in the ALTER TABLE command**

   a) Add primary Key constant on column supplier_no in table supplier_master
   b) Add Foreign Key constraint on column s_order_no in table sales_order_details referencing table sales_order, modify column qty_ordered to include NOT NULL constant

6. **Logical Operators**

   Use following logical operators in SQL statement

   a) And - all of must be included
   b) Or - any of may be included
   c) Not - none of would be included

7. **Pattern Matching**

   a) The use of the *like* predicate
   b) The *in* and *not in* predicate

8. **Grouping Data from tables in SQL**

9. **Manipulating Dates in SQL**

10. **JOINS**

    a) Joining multiple tables (Equi Joins)
    b) Joining a table to itself (Self Joins)

11. **SUBQUERIES**

    Use sub queries for the following commands

    a) To insert records in the target table
    b) To create tables and insert records in this table
    c) To update records in the target table
    d) To create views
    e) To provide values for the condition in the WHERE, HAVING IN, SELECT UPDATE and DELETE statements
Semester – III  
Skill Based Course – 1: INTERNET PROGRAMMING  
Course Code: N5BIT3T46  
Total Instructional Hours: 50

OBJECTIVE: To enable the students learn the concept of internet services, internet protocols, markup language, client-side scripting concepts.  
SKILL SETS TO BE ACQUIRED: To provide in-depth knowledge of designing a webpage.

UNIT – I  
Hrs: 10  

UNIT – II  
Hrs: 10  

UNIT – III  
Hrs: 10  

UNIT – IV  
Hrs: 10  
Introduction to XML - Well formed XML - CSS - XSL - Valid XML - DTD - XSD -Introduction to DOM and SAX.

UNIT – V  
Hrs: 10  

TEXT BOOK:

REFERENCE BOOKS:

SEMMESTER- III - கல்பக் கற்பலம்  
Credits : 2  
 portals - IV கல்ப -I  
முனைஜாயம்  
Course Code : N5BIT3T51A  
Total Instructional hours- 27
<table>
<thead>
<tr>
<th>Semester</th>
<th>Description</th>
<th>Credits</th>
<th>Course Code</th>
<th>Total Instructional hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td></td>
<td></td>
<td>N5BIT3T51B</td>
<td>27</td>
</tr>
</tbody>
</table>

**SEMESTER - III - கருவற்று விளகி**

**Credits : 2**

Course Code : N5BIT3T51B

Total Instructional hours - 27
Semester- IV

General Knowledge and English for Competency-II

Credit: 2  
Course Code: N5BIT4T31  
Hours per Week: 2  
Total Instructional hours: 27

Course Objective

To prepare students for competitive examination with general knowledge.

Unit-I

Credit Hours: 6

Ancient History (before Mughal Period)
Mughal History
British Period
Freedom Struggle
Indian Constitution (Indian Policy)

Unit-II

Credit Hours: 6

Indian Geography, Indian Economics, Sports and Awards
Unit-III  
Science and Technology  
Chemistry, Physics, Botany, Zoology and Environment Studies  
Credit Hours: 5

Unit-IV  
Constructing Passages  
Comprehension  
Credit Hours: 5

Unit-V  
Sentence Completion  
Spotting Errors  
Credit Hours: 5

Suggested Reading  
English for Competitive Examination, R. P. Bhatnagar and Rajul Bhargava, Special Edition  
Macmillan India Limited, 2007  
Renu General Knowledge Book

Semester – IV  
ALLIED 4 : ACCOUNTANCY

Credits: 5  
Course Code: N5BIT4T32  
Total Instructional Hours: 75

Course Objective: To enable the students to learn the Principles and Concepts of Accountancy  
Skill sets to be acquired: On Successful Completion of this course, the students are expected to have a better understanding on the  
➢ Concepts and Conventions of Accounting  
➢ Basic Accounting framework

UNIT – I  
( 15 Hours)

UNIT – II  
Subsidiary books-Various types of Cash Book  
( 15 Hours)

UNIT III  
Bank Reconciliation Statement- Errors and their Rectification.  
( 15 Hours)

UNIT – IV  
Final accounts of Sole Traders with Adjustments  
( 15 Hours)

UNIT – V  
Bill of exchange (excluding Accommodation Bill).  
( 15 Hours)

Note: The Syllabus will have 20 % Theory and 80 % Problems..

TEXT BOOKS  

REFERENCE BOOKS  
Semester – IV  
Core 7: SOFTWARE ENGINEERING

Credits: 5  
Course Code: N5BIT4T43  
Total Instructional Hours: 75

OBJECTIVE: To impart knowledge on the development process of Software.

SKILL SETS TO BE ACQUIRED: To provide skill in developing a software project.

UNIT – I  
Hrs: 15

UNIT – II  
Hrs: 15

UNIT – III  
Hrs: 15

UNIT – IV  
Hrs: 15

UNIT – V  
Hrs: 15

TEXT BOOK:

REFERENCE BOOKS:

Semester – IV  
Core 8: GRAPHICS AND MULTIMEDIA

Credits: 5  
Course Code: N5BIT4T44  
Total Instructional Hours: 75

OBJECTIVE: To inculcate knowledge on Graphics & Multimedia concepts.
SKILL SETS TO BE ACQUIRED: To provide Mathematical Knowledge on Graphics and Technical background of Multimedia.

UNIT – I


UNIT – II


UNIT – III


UNIT – IV


UNIT – V


TEXT BOOKS:


REFERENCE BOOKS:
Credits: 4
Course Code: N5BIT4P45
Total Instructional Hours: 75

Graphics:

1. Write a program to rotate an image.
2. Write a program to drop each word of a sentence one by one from the top.
3. Write a program to drop a line using DDA Algorithm.
4. Write a program to move a car with sound effect.
5. Write a program to bounce a ball and move it with sound effect.
6. Write a program to test whether a given pixel is inside or outside or on a polygon.

Multimedia:

1. Create Sun Flower using Photoshop.
2. Animate Plane Flying in the Clouds using Photoshop.
4. Create See-through text using Photoshop.
5. Create a Web Page using Photoshop.
6. Convert Black and White Photo to Color Photo using Photoshop.

Semester – IV
Skill Based Course – 2: INTERNET PROGRAMMING LAB
Credits: 3
Course Code: N5BIT4P46
Total Instructional Hours: 50

HTML

1. Design an HTML web page, which makes use of INPUT, META, SCRIPT, FORM, APPLET and MAP.
2. Write a HTML document to print your class Time Table.
3. Develop a HTML document to display a Registration Form for an inter-collegiate function.
4. Develop a HTML document which displays your name as  <h1>heading and displays any four of your friends. Each of your friend’s names must appear as hot text. When you click your friend’s name, it must open another HTML document, which tells about your friend.

JAVASCRIPT

5. Write Java Script snippet which makes use of Java Script’s inbuilt as well as user defined objects like navigator, date, array, event, number, etc.
6. Using Java Script’s window, document objects and their properties write various methods like alert ( ), eval( ), parseInt ( ), etc. to give the dynamic functionality to HTML web pages.
7. Write a Java Script program to implement simple calculator.
8. Write code which does the form validation in various INPUT elements like TextFiled, Password, e-mail etc.

XML

10. Design an XML document to display your bio-data
11. Design XML page using CSS and implement internal DTD, external DTD and entity declaration.
12. Writing XML web documents which makes use of XML declaration, element declaration and attribute declaration.

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SEMESTER - IV - అవతరణ పరిస్థితి
పరిస్థితి - IV అవతరణ - II

Credits : 2

Course Code : N5BIT4T51A
Total Instructional hours - 27

- అవతరణ - I
  అవతరణ పరిస్థితి విచారణ.
  మామానం, కామానం, కలేవానం, ప్రభావానం,
  8-2 త్రవ్వానం.

- అవతరణ - II
  అవతరణ పరిస్థితి విచారణ.
  (ప్రతిమనం, అనుసరణాత్మక పరిస్థితి,
  నిషేధాన్ని సంపాదించడం, 2 పనాలు అవతరణం)

- అవతరణ - III
  అవతరణ పరిస్థితి
  పరిస్థితి, కలేవానం, కలేవానం ప్రభావానం
  అవతరణ.

- అవతరణ - IV
  అవతరణ పరిస్థితి విచారణ.
  8-2 త్రవ్వానం పరిస్థితి,
  అవతరణ పరిస్థితి, పరిస్థితి.

- అవతరణ - V
  అవతరణ పరిస్థితి పండదక్షిణం.
  ఆధార పరిస్థితి పండదక్షిణం

మాచరం దినాలు

- కార్యక్రమ సంప్రదాయం
  సమాచార, సంస్త పండదక్షిణం
  8-7 త్రవ్వానం పరిస్థితి.
  పరిస్థితి పండదక్షిణం (సంప్రదాయం - 8)

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SEMESTER - IV - అవతరణ పరిస్థితి
పరిస్థితి - IV అవతరణ - II

Credits : 2

Course Code : N5BIT4T51B
Total Instructional hours - 27

- అవతరణ - I
  అవతరణ పరిస్థితి ప్రతిమన
  8-2 త్రవ్వానం

- అవతరణ - II
  అవతరణ పరిస్థితి ప్రతిమన

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SEMESTER –IV

Course code: N5BIT4T57

Part -v எண்ணியல் கான்னைநிலை

Course: 1

Credits: I

Instructional Hours: 50

இல்லைகள்: ஒற்றையும் முதுகள் மத்திய புதுக்குறிகள் விளக்கத்தில் அடையாளம் ஓரமான பதிலிட்டியாக போன்று பதிவு எடுக்குவதற்கு வேண்டும் இயல்பை புதிய ஓரியல் அறிவியல், விளக்கம்.

அடைய 1 திண்டுவீரும், கட்டுருகி, கண்ணாட்டு அண்மதி, பதிவு அடை இயற்கைக் கேரளம் 10 Hrs

அடைய 2 கிளை வெளியென்று, படியும் வெளியும் 10 Hrs

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BOOKS REFERENCES:

1. The world order of Holistic unity-ThathuvagnaniVethathiri Maharishi.
3. 16 personality factor-Raymond Cattell.
4. Multiple Intelligence-Howard Gatgner.
5. Psychology-Robert A. Baron.
7. Light on yoga-BKS Iyenger.
Part -v  சூட்டக்கல்விக்களா

தலை II

Course code :N5BIT4P57C

Credits: I
Instructional Hours: 50

அநுக்கி I  வகை முனைகளின் வளிமத்திய பணிக்கொழுத்து

12 Hrs
1.1 வளிமத்திய பணிக்கொழுத்து1.2 கலவையம் முனை1.3 கேள்விகளின் பணிக்கொழுத்து

அநுக்கி II  வகை

2.1 கலவை- நிலைக்கொளு- சோதனையான வேலை - வடைக்கொளு 12 Hrs
2.2 சோதனைகள் பணியாக சோதனை கொள்ளல் முனைகள்
2.3 வேலைகள்- புதுச்செவுக்கை பார்வை - குழுவின் பார்வை -குழுவின் பார்வை - குழுவின் பார்வை

அநுக்கி III  வகையான வினைப்பாடு - அந்தோற்றங்கள் முனைப்பாடு 10 Hrs

3.1 வினைப்பாடுகள் முனைய வினைப்பாடு வினைப்பாடு
3.2 அந்தோற்றங்கள் முனைப்பாடு

அநுக்கி IV  வகை

4.1 வகைய வினைப்பாடு முனைப்பாடு4.2 கலவையான வேலை - முனை

அநுக்கி V  அறிவியல்

6 Hrs

5.1 குழுவின் வினை முனை5.2 சோதனையான வேலையம் (சோதனையான வேலை)
5.3 எண் வளிமத்திய பார்வை - முனைய பார்வை5.4 எண் வளிமத்திய பார்வை

BOOKS REFERENCES

1. வளிமத்திய பணிக்கொழுத்து-சோதனை முனைகளின் பார்வை
2. கலவையம் -சோதனை முனைகளின் பார்வை
3. வேலைகள் -சோதனை முனைகளின் பார்வை
4. வேலை -சோதனை முனைகளின் பார்வை
5. திகட்ட பாடல் - சோதனை -முனை
6. Sound Health through yoga-Dr.Chandrasekaran
7. Light on yoga-BKS.Iyenger

Semester – V
Core 9: Job Oriented Course: MATHEMATICS FOR COMPETITIVE EXAMINATIONS
Course Objective: To train the students on quantitative aptitude and verbal reasoning.

Skill sets to be acquired: After the completion of the course the student will gain confidence and skill to appear for all competitive examinations conducted by central and state governments.

UNIT I
Numbers
HCF & LCM of Numbers
Average
Problems on numbers
Problems on ages

UNIT II
Percentage
Profit and Loss
Ratio and Proportion
Partnership

UNIT III
Time and work
Pipes and Cisterns
Time and Distance
Problems on Trains

UNIT IV
Boat and Streams
Allegation or Mixture
Simple Interest
Compound Interest

UNIT V
Permutation and combination
Data Interpretation:
Bar graphs
Pie Charts
Line graphs

Text Book:

Reference Books:

Semester – V
Core 10: JAVA PROGRAMMING

OBJECTIVE: To teach the concepts of Java programming language.

SKILL SETS TO BE ACQUIRED: To develop programming skill in Java language.
UNIT – I


UNIT – II


UNIT – III


UNIT – IV


UNIT – V


TEXT BOOK:

REFERENCE BOOKS:

Semester – V

Core 11: PRINCIPLES OF DATA COMMUNICATIONS AND NETWORKS

Credits: 3

Course Code: NSBIT5T44

Total Instructional Hours: 50

OBJECTIVE: To impart knowledge of the networking protocols and standards.

SKILL SETS TO BE ACQUIRED: To provide thorough knowledge of the data communication protocols and network topologies.

UNIT – I

Hrs: 10
Introduction to Data Communication and Networking: Introduction – Fundamental concepts

UNIT – II
Hrs: 10

UNIT – III
Hrs: 10

UNIT – IV
Hrs: 10

UNIT – V
Hrs: 10

TEXT BOOK:

REFERENCE BOOKS:
Semester - V
Core Lab – 5: JAVA PROGRAMMING LAB
Credits: 4
Course Code: N5BIT5P95
Total Instructional Hours: 75

1. Program to generate a Pascal triangle.
2. Program for roots of a Quadratic equation.
3. Program for merging two sorted arrays.
4. Program for letter frequencies in a given string.
5. Program for multithreading.
6. Program for preparing mark list using inheritance.
7. Program for multiple inheritance.
8. Program for creating your own package.
9. Program that counts the number of lines, words and characters in a given text file.
10. Program that right justifies a text file.
11. Program that displays a digital clock using applet.
12. Program that generates a human face using applet.
13. Create an applet containing three buttons labeled red, green and blue. Depending on the button pressed, the background color of the applet should change.
14. Create an applet that accepts two numbers in two text fields. Add a button labeled “equals” which when pressed should add the two numbers and display the result in the third text field.
15. Program for Exception Handling.

SEMESTER – V
CORE 12: PROJECT WORK LAB (N5BIT5R46)
GUIDELINES FOR PROJECT

SREE SARASWATHI THYAGARAJA COLLEGE (Autonomous)
An ISO 9001:2008 Certified and NAAC Accredited Institution
(Affiliated to Bharathiar University, Coimbatore), Pollachi – 642 107

1. OBJECTIVE OF SUMMER PROJECT
The primary objective of the Project is to gain through practical experience, a sound appreciation and understanding of the theoretical principles learnt in four semesters. Project is oriented towards developing the skills, knowledge and attitudes needed to make an effective start as a member of the Computer / IT profession.

Some of the many expected advantages to be gained by an UG graduates are
✓ Systematic introduction to the ways of industry and developing talent and attitudes, so that he / she can enjoy fully, a career in IT industry (as a S/W developer / Trainee / Software Engineer/ Database administrator etc. ).
✓ Recognizing his / her responsibilities as a professional of the future.
✓ Understanding real life situations in industrial organizations and their related environments and accelerating the learning process of how his / her knowledge could be used in a realistic way.
✓ Understanding that the problems encountered in the industry rarely have unique solutions and gaining experience to select the optimal solution from the many alternatives available.
2. PROCEDURE
The following procedure will be adopted for the process:
2.1 Before the training actually starts, profile of the company / organization must be submitted for the evaluation purposes.
2.2 The letter of the training will be issued only by the Centre Head or Project incharge.
2.3 No student will change organization/Project during the training period. However for the betterment of students case will be put up by Project Incharge approved by the Centre Head.
2.4 After the student joins the training, a joining report must be submitted within stipulated time.
2.5 No project will be accepted unless it is done in consultation with the faculty and signed by him.

3. RULES
All the students must follow the following rules & regulations.
   a. All the communication must be in writing. No verbal communication will be accepted.
   b. Students should follow the procedures as mentioned in guidelines.
   c. All the reports and forms must be submitted in the prescribed formats.
   d. Student must be in regular touch with his/her project in charge.

4. TYPES OF ORGANIZATIONS
Students can opt for various types of institutes / organizations for their summer project. But before the training actually starts, profile of the company / organization must be submitted. A group of students not exceeding four may choose one organization / institution for project.

5. FIELDS FOR PROJECTS
Following is the list of fields under which projects can be undertaken. Students are required to select only one project from the category listed below and get it approved from their project in charge.
   ✓ Database projects.
   ✓ Network projects.
   ✓ Web based projects.
   ✓ Application Oriented
   ✓ System side projects

6. RULES FOR PRESENTATION
   ✓ Students should use LCD for Presentation and Demonstration.
   ✓ The presentation should not be paper reading and duration of the project will be of 10 minutes to 20 minutes for each presentation.

7. GUIDELINE FOR PRESENTATION OF PROJECT REPORT

7.1. NUMBER OF COPIES TO BE SUBMITTED
   Students should submit two copies to the Head of the Department concerned on or before the specified date. The Head of the Department should send one and one copy to the student concerned.

7.2. SIZE OF PROJECT REPORT
   The size of project report should not exceed 100 pages of typed matter reckoned from the first page of Chapter 1 to the last page.

7.3. ARRANGEMENT OF CONTENTS OF PROJECT REPORT
   The sequence in which the project report material should be arranged and bound should be as follows
7.4. PROJECT REPORT FORMAT: Refer Appendix 1

7.5. PAGE DIMENSIONS AND MARGIN
The dimensions of the final bound copies of the project report should be 290mm x 205mm. Standard A4 size (297mm x 210mm) paper may be used for preparing the copies.
The final two copies of the project report (at the time of submission) should have the following page margins:

- Top edge: 30 to 35 mm
- Bottom edge: 25 to 30 mm
- Left side: 35 to 40 mm
- Right side: 20 to 25 mm

The project report should be prepared on good quality white paper preferably not lower than 80gms/Sq. Meter.
Tables and figures should conform to the margin specifications. Large size figures should be photographically or otherwise reduced to the appropriate size before insertion.

7.6. MANUSCRIPT PREPARATION:
The candidates shall supply a typed copy of the manuscript to the guide for the purpose of approval. In the preparation of the manuscript, care should be taken to ensure that all textual matter is typed to the extent possible in the same format as may be required for the final project report.
Hence, some of the information required for the final typing of the project report is included also in this section.
The headings of all items 2 to 11 listed section 4 should be typed in capital letters without punctuation and centered 50mm below the top of the page. The text should commence 4 spaces below this heading. The page numbering for all items 1 to 8 should be done using lower case Roman numerals and the pages thereafter should be numbered using Arabic numerals.

7.6.1. Title page – A specimen copy of the title page for respective UG programmes for project report is given in Appendix 2.

7.6.2. Bonafide Certificate – Using double spacing for typing the Bonafide Certificate should be in this format as given in Appendix 3.

7.6.3. Synopsis – Synopsis should be an essay type of narrative not exceeding 200 words, outlining the problem, the methodology used for tackling it and a summary of the project.

7.6.4. Acknowledgement – It should be brief and should not exceed one page when typed double spacing.

7.6.5. Table of contents – The table of contents should list all material following it as well as any material which precedes it. The title page, bonafide Certificate and acknowledgement will not find a place among the items listed in the table of contents but the page numbers of which are in lower case Roman letters. One and a half spacing should be adopted for typing the matter under this head.
7.6.6. **List of Tables and Figures** – The list should use exactly the same captions as they appear above the tables/Figures in the text. One and a half spacing should be adopted for typing the matter under this head.

7.6.7. The Project may be broadly divided into 3 parts (i) Introduction (ii) Development of the main theme of the project report, (iii) Results, Discussion and Conclusion.

7.6.8. **Appendices** – Appendices are provided to give supplementary information, which if included in the main text may serve as a distraction and cloud the central theme under discussion.

7.6.9. **Bibliography**

- **Books:** AUTHOR NAME, TITLE, PUBLICATION, EDITION.
- **Web Reference:** URL/Web Address.

### 8. TYPING INSTRUCTIONS

#### 8.1. General

This section includes additional information for final typing of the project report. Some information given earlier under ‘Manuscript preparation’ shall also be referred.

- The impressions on the typed copies should be black in colour.
- Uniformity in the font of letters in the same project report shall be observed.
- A sub-heading at the bottom of a page must have at least two full lines below it or else it should be carried over to the next page.
- The last word of any page should not be split using a hyphen.
- One and a half spacing should be used for typing the general text.
- Single spacing should be used for typing:
  - (i) Long Tables
  - (ii) Long quotations
  - (iii) Foot notes
  - (iv) Multiline captions
  - (v) References

All quotations exceeding one line should be typed in an indented space – the indentation being 15mm from either margin.

Double spacing should be used for typing the Bonafide Certificate and Acknowledgement.

#### 8.2. Chapters

The format for typing chapter headings, division’s headings and sub division headings are explained through the following illustrative examples.

- **Chapter heading**: CHAPTER 1
- **Division heading**: INTRODUCTION
- **Division heading**: 1.1 OUTLINE OF PROJECT REPORT
- **Sub-division heading**: 1.1.2. Literature review.
The word CHAPTER without punctuation should be centered 50mm down from the top of the page. Two spaces below, the title of the chapter should be typed centrally in capital letters. The text should commence 4 spaces below this title, the first letter of the text starting 20mm, inside from the left hand margin.

The division and sub-division captions along with their numberings should be left-justified. The typed material directly below division or sub-division heading should commence 2 spaces below it and should be offset 20mm from the left hand margin. Within a division or sub-division, paragraphs are permitted. Even paragraph should commence 3 spaces below the last line of the preceding paragraph, the first letter in the paragraph being offset from the left hand margin by 20mm.

9. NUMBERING INSTRUCTIONS

9.1. Page Numbering

All pages numbers (whether it be in Roman or Arabic numbers) should be typed without punctuation on the upper right hand corner 20mm from top with the last digit in line with the right hand margin. The preliminary pages of the project report (such as Title page, Acknowledgement, Table of Contents etc.) should be numbered in lower case Roman numerals. The title page will be numbered as (i) but this should not be typed. The page immediately following the title page shall be numbered (ii) and it should appear at the top right hand corner as already specified. Pages of main text, starting with Chapter 1 should be consecutively numbered using Arabic numerals.

9.2. Numbering of Chapters, Divisions and Sub-Divisions

The numbering of chapters, divisions and sub-divisions should be done, using Arabic numerals only and further decimal notation should be used for numbering the divisions and sub-divisions within a chapter. For example, sub-division 4 under division 3 belonging to chapter 2 should be numbered as 2.3.4. The caption for the sub-division should immediately follow the number assigned to it.

Every chapter beginning with the first chapter should be serially numbered using Arabic numerals. Appendices included should also be numbered in an identical manner starting with Appendix 1.

9.3. Numbering of Tables and Figures

Tables and Figures appearing anywhere in the project report should bear appropriate numbers. The rule for assigning such numbers is illustrated through an example. Thus if as figure in Chapter 3, happens to be the fourth then assign 3.4 to that figure. Identical rules apply for tables except that the word Figures is replaced by the word Table. If figures (or tables) appear in appendices then figure 3 in Appendix 2 will be designated as Figure A 2.3. If a table to be continued into the next page this may be done, but no line should be drawn underneath an unfinished table. The top line of the table continued into the next page should, for example read Table 2.1 (continued) placed centrally and underlined.

10. BINDING SPECIFICATIONS
Project report submitted for UG Programmes should be bound using flexible cover of Silver white. The cover should be printed in black letters and the text for printing should be identical to what has been prescribed for the title page.

APPENDIX 1

Project Report Format

- Acknowledgement
- Organization Certificate
- Synopsis
- Index

1. Introduction
   1.1. Overview of the Project

2. System Study
   2.1. Existing System
   2.2. Proposed System

3. System Specification
   3.1. Hardware specification
   3.2. Software specification

4. System Design
   4.1. DFD
   4.2. ER-Diagram
   4.3. SFD
   4.4. Database Design

5. Testing
   5.1. Testing Methodologies

6. Implementation

7. Future Enhancements


9. Source Code

10. Bibliography

**********

APPENDIX 2

PROJECT TITLE
PROJECT REPORT

Submitted by
NAME OF THE STUDENT
(REG_NO:               )

Under the guidance of
GUIDE NAME, QUALIFICATION AND DESIGNATION

In partial fulfillment of the requirements for the award of the degree of

BACHELOR OF INFORMATION TECHNOLOGY
Bharathiar University, Coimbatore

DEPARTMENT OF INFORMATION TECHNOLOGY
SREE SARASWATHI THYAGARAJA COLLEGE
(Autonomous)
An ISO 9001:2008 Certified and NACC Accredited Institution
(Affiliated to Bharathiar University, Coimbatore)
Pollachi – 642 107

Month and Year

APPENDIX 3
DECLARATION

I <Student Name>, <Reg_No., do hereby declare that this project entitled< Name of the Project> submitted to the SREE SARASWATHI THYAGARAJA COLLEGE, Pollachi in partial fulfillment of requirement of the award of the degree BACHELOR OF INFORMATION TECHNOLOGY, is a record of original work done by me during the period of study at SREE SARASWATHI THYAGARAJA COLLEGE, POLLACHI, under the guidance of <Guide Name> Lecturer in Information Technology.

Place :                                                Signature of Candidate
Date :

APPENDIX 4
CERTIFICATE

This is to certify that the project work entitled "<PROJECT TITLE>" is a bonafide record of work done by <STUDENT NAME AND REGISTER NUMBER> submitted in partial fulfillment of the requirement for the award of the degree BACHELOR OF INFORMATION TECHNOLOGY of Bharathiar University, Coimbatore under my supervision.
Every student shall participate compulsorily for a period of not less than two years (4 semesters) in any one of the following programmes.

- NSS
- NCC
- Sports
- YRC
- Other Extra curricular activities.

The student’s performance will be examined by the staff in-charge of extension activities along with the Head of the respective department and a senior member of the Department on the following parameters. The marks shall be sent to the Controller of Examinations before the commencement of the final semester examinations.

- 20% of marks for Regularity of attendance
- 60% of marks for Active Participation in classes/camps/games/special Camps/programmes in college District/ State/ University activities.
- 10% of marks for Exemplary awards/Certificates/Prizes.
- 10% of marks for Other Social components such as Blood Donations, Fine Arts, etc.

The above activities shall be conducted outside the regular working hours of the college. The marks sheet will carry the following remarks as per the following mark range.

- A-Exemplary - 80 and above
- B-very good - 70-79
- C-good - 60-69
- D-fair - 50-59
- E-Satisfactory - 40-49

This grading shall be incorporated in the mark sheet to be issued at the end of the semester. (Handicapped students who are unable to participate in any of the above activities shall be required
Semester – VI
Core 13: DOT NET PROGRAMMING
Credits: 5   Course Code: N5BIT6T43
Total Instructional Hours: 75

OBJECTIVE: To teach the concepts of Visual Basic .NET and to develop simple applications.

SKILL SETS TO BE ACQUIRED: To develop programming skill in Visual Basic .NET.

UNIT – I
Hrs: 15

UNIT – II
Hrs: 15

UNIT – III
Hrs: 15

UNIT – IV
Hrs: 15
Windows Forms: List Boxes, Checked List Boxes, Combo Boxes and Picture Boxes: Using the ListBox Class – Adding items to a List Box – Removing items from a ListBox – Sorting a ListBox – Using the CheckedListBox Class – Adding items to checked List Boxes – Using the ComboBox Class – Creating Simple ComboBoxes, Drop-down Combo Boxes and Drop-down List Combo Boxes – Adding items to a Combo Box – Removing items from a Combo Box – Sorting a Combo Box – Using the PictureBox Class – Windows Forms: Scroll Bars, Splitters, Track Bars, Pickers, Notify Icons, Tool Tips and Timers: Scroll Bars – Splitters – Track Bars – Pickers – Notify Icons – Tool Tips – Timers – Using the HScrollBar and VScrollBar Classes – Using the DateTimePicker Class – Using the MonthCalendar Class.

UNIT – V
Hrs: 15

TEXT BOOK:
REFERENCE BOOKS:

Semester - VI
Core Lab – 6: DOT NET PROGRAMMING LAB
Credits: 4
Course Code: N5BIT6P44
Total Instructional Hours: 75

1. Program for various font applications.
2. Program for a notepad application.
3. Program to maintain employee details.
4. Program to maintain supplier details.
5. Program to simulate a simple calculator.
6. Program to simulate a digital clock with reset option.
7. Program to maintain student details.
8. Program for newspaper vendor.
9. Program to create and read text file.
10. Program for hospital management system.

Semester – VI
Skill Based Course – 3: PHP PROGRAMMING
Credits: 3
Course Code: N5BIT6T45
Total Instructional Hours: 50

OBJECTIVE: To impart knowledge about HTML and PHP.

SKILL SETS TO BE ACQUIRED: To provide a programming skill in designing and developing web pages.

UNIT – I
Hrs: 10

UNIT – II
Hrs: 10

UNIT – III
Hrs: 10

UNIT – IV
Hrs: 10
Using Functions and Classes: Creating User-Defined Functions - Creating Classes – Working with Files and Directories: Reading Files-Writing Files.

UNIT – V
Hrs: 10

TEXT BOOK:

REFERENCE BOOKS:

Semester – VI
Skill Based Course – 4: PHP PROGRAMMING LAB
Credits: 3
Course Code: N5BIT6P46
Total Instructional Hours: 50

1. Develop a PHP program using controls and functions
2. Develop a PHP program and check message passing mechanism between pages
3. Develop a PHP program using String function and Arrays.
4. Develop a PHP program to display student information using MYSQL table.
5. Develop a PHP program to design a college application form using MYSQL table.
6. Develop a PHP program using parsing functions (use Tokenizing)
7. Develop a PHP program and check Regular Expression, HTML functions, Hashing functions.
8. Develop a PHP program and check File System functions, Network functions, Date and time functions.
9. Develop a PHP program using session
10. Develop a PHP program using cookie and session

Semester – V
Elective – I: A. MOBILE COMPUTING AND WAP
Credits: 5
Course Code: N5BIT5T42
Total Instructional Hours: 60

OBJECTIVE: To understand the basics of wireless data communication technologies, Wireless LAN and Wireless Application Protocols.

SKILL SETS TO BE ACQUIRED: To enable the students to gain fundamental techniques in Mobile Communications, Mobile content services and Wireless Technology.

UNIT – I
UNIT – II


UNIT – III


UNIT – IV


UNIT – V


TEXT BOOK:

REFERENCE BOOKS:

Semester – V

Elective – I: B. CLIENT / SERVER TECHNOLOGIES

Credits: 5

Course Code: N5BIT5T42

Total Instructional Hours: 60

OBJECTIVE: To Understand the concepts of Network Operating System and Various Servers

SKILL SETS TO BE ACQUIRED: To Enable the students to have Complete Knowledge in Transaction Processing, Web Applications, Database Servers and Network Operating Systems.

UNIT – I


UNIT – II

UNIT – III


UNIT – IV

Client/Server Transaction Processing: The ACID properties-Types of Transaction Models-
TP Monitors: what is TP monitor – TP monitor and Transaction management standards - TP monitor client/server interaction types – Transactional RPCs, QUEUEs and Conversations-
Client/Server Groupware: What is Groupware-The Components of Groupware.

Distributed Objects and Components: Distributed Objects – Components – Super components - 3-Tier
Client/Server Object style

UNIT – V

Web Client/Server: URL –shortest HTML tutorial –HTTP-3-tier client/server, Web style-
HTML Web based forms-CGI: The server side of the Web-Web Security-The Internet and the Intranets-JAVA and HOT JAVA- Applets Components, Java style- The JAVA Libraries, JDBC.

TEXT BOOK:

REFERENCE BOOK:

Semester – V

Elective – I: C: INFORMATION SECURITY

Credits: 5
Course Code: NSBIT5T42
Total Instructional Hours: 60

Course Objective: To Understand the concepts of Network Securities and its applications.
Skill Sets To Be Acquired: To enable the students to have Complete Knowledge in operating system security, network security, software security and language based security.

UNIT I
Introduction to computer security: Basic concepts, threat models common security goals. Cryptography and cryptographic protocols, including encryption, authentication, message authentication codes, hash functions, one-way functions, public-key cryptography, secure channels, zero knowledge in practice, cryptographic protocols and their integration into distributed systems, and other applications.

UNIT II
Operating system security: memory protection, access control, authorization, authenticating user, enforcement of security, security evaluation, trusted devices, digital rights management.

UNIT III
UNIT IV

**Software security:** Secure software engineering, defensive programming, buffer overruns and other implementation flaws.

UNIT V

**Language-based security:** Analysis of code for security errors, safe languages, and sandboxing techniques. Case Studies: privacy, mobile code, digital rights management and copy protection, trusted devices, denial of service and availability, network based attacks, security and the law, electronic voting.

**TEXTBOOKS / REFERENCES:**


**Objective:**

Elective – I: D. MASTERING LAN AND TROUBLESHOOTING

Credits: 5

Course Code: N5BIT5T42

Total Instructional Hours: 60

**Objective:** To Enable the students to learn about the internal organization of a PC and Local Area Network

**Skill Sets to be Acquired:** On successful completion of the course the student should have knowledge on types of faults occurring in PC and the methodologies to solve the problems.

**UNIT – I**

**Hrs: 12**

**PC- Hardware overview:** Introduction to computer organization-Memory-PC family-PC hardware-interconnections between Boxes-Inside the boxes:-motherboard, daughter boards, floppy disk drive, HDD, speaker, mode switch, front panel indicators & Control-mother board logic-memory space-I/O port address-wait state-interrupts -I/O data transfer-DMA channels-POST sequence.

**UNIT – II**

**Hrs: 15**

**Peripheral Devices:** Floppy drive controller-Overview-Disk format-FDC system interface-FDD interface Hard Disk controller-overview-Disk Drives and interface-controller post description Hard disk card-Hard disk format.

**Display Adapter:** CRT display- CRT controller principle -CRT controller 6845

**Printer controller:** Centronics interface-programming sequence -Hardware overview-printer-sub assemblers.

**UNIT – III**

**Hrs: 12**

**Motherboard Circuits:** Mother board functions-functional units and inter communications:-Reset logic -CPU nucleus logic-DMA logic-Wait state logic-NM logic-speaker logic-keyboard interface-SMPS.
UNIT – IV

UNIT – V

REFERENCE BOOKS:
3. Winn & Rosch - "Hardware Bible" , Tec media.
4. Ray Duncan - "Dos Programming".

Semester – VI
Elective – II: A: DATA MINING AND WAREHOUSING
Credits: 5  Course Code: N5BIT6T41
Total Instructional Hours: 60

OBJECTIVE: To teach the Data Mining techniques and the concepts of Data Warehousing.

SKILL SETS TO BE ACQUIRED: To provide knowledge of the Data mining tools and the applications of Data Warehousing.

UNIT – I
Data Mining - Data mining versus query tools - Data mining in marketing – Practical applications of data mining – What is learning? – Self-learning computer systems – Machine learning and the methodology of science – Concept learning – A Kangaroo in mist – Data mining and the data warehouse: Need for a data warehouse – Designing decision support systems – Client / Server and data warehousing.

UNIT – II

UNIT – III
UNIT – IV  
Hrs: 12  
UNIT – V  
Hrs: 12  

**TEXT BOOKS:**

**REFERENCE BOOKS:**

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**Semester - VI**

**Elective – II: B: E-LEARNING**

Credits: 5  
Course Code: N5BIT6T41  
Total Instructional Hours: 60

**OBJECTIVE:** To enable the students to learn about concept of e-learning.

**SKILL SETS TO BE ACQUIRED:** On successful completion of the course the student should have knowledge on the softwares to develop content of e-learning.

**UNIT-I**  
(Hrs: 12)  

**UNIT-II**  
(Hrs: 12)  

**UNIT-III**  
(Hrs: 12)  
UNIT-IV (Hrs: 12)

UNIT-V (Hrs: 12)
Video: Integrating and Importing Video – Editing video with Adobe Premiere – Organizing & Editing clips – Adding Transition between clips – Adding special effects to video.

TEXT BOOKS:

REFERENCE BOOKS:

Semester – VI
Elective – II: C.BIO – INFORMATICS

Credits: 5
Course Code: N5BIT6T41
Total Instructional Hours: 60

Objective: This course presents an introduction to bioinformatics, Genome information resources, data base searchers and pair wise alignment, multiple sequence alignment, RNA structure, proteomics.

Skill sets to be acquired: On successful completion of the course the student should have knowledge on the research area about bioinformatics.

UNIT I 11 hrs

UNIT II 13 hrs
Genome Information Resources. DNA Sequences data base – Specialised genomic Resources. DNA Sequence analysis. Why analyse DNA? – Gene structure – Features of DNA sequence analysis – Issues in the interpretation and EST search – Approach of Gene hunting – Cell CDNA libraries and ESTs – Approaches to EST analysis – Effect of EST data on DNA data base examples of EST analysis.

UNIT III 13 hrs
UNIT IV  
13 hrs

UNIT V  
10 hrs

Text Book:

Reference Book:
UNIT – IV
Hrs: 12

UNIT – V
Hrs: 12

TEXT BOOK:

REFERENCE BOOKS:

Semester – VI
Elective – III: A. MANAGEMENT INFORMATION SYSTEM
Credits: 5
Course Code: N5BIT6T42
Total Instructional Hours: 60

OBJECTIVE: To know the Integration of Business Information through Computers.
SKILL SET TO BE ACQUIRED: After the successful completion of the course the student must beware of utilization of business information for decision making.

Unit I

Unit II

Unit III

Unit IV
Database Management Systems – Conceptual Presentation – Client Server Architectures
Networks – Business Process Re–Engineering [BPR].

**Unit V** 12hrs
Functional Management Information System : Financial – Accounting – Marketing-

**TEXT BOOKS:**
2. P.Mohan,” Management Information System”,Himalaya Publishing house,New Delhi,

**REFERENCE BOOK:**
Gorden B. Davis &Margrethe H. Olson, “Management Information System”,

**Semester –VI**
Elective – III: B: PRINCIPLES OF MANAGEMENT
Credits: 5
Course Code:N5BIT6T42
Total Instructional Hours: 60

**COURSE OBJECTIVE:**To familiarize the students with the basics of principles of management.

**SKILL SET TO BE ACQUIRED:** On successful completion, the students are expected to acquire
managerial traits and to enable the students become socially conscious managers.

**Unit-I** 12hrs
Management- Meaning- Nature- Importance- Functions of Management- Is Management a
Science (or) an art- Levels of Management- School of Management thoughts: F.W Taylor, Henry
Fayol, Peter Drucker.

**Unit-II** 12hrs
Planning- Nature-Importance-Steps in planning- How to make effective planning-
Limitations- Types of plan- Decision making: Meaning- Types of decision- Factors involved in
Decision Making.

**Unit-III** 12hrs
Organisation-Nature- Process of Organisation-Importance of Organisation- Principles of
Staff Organisation- Committee Organisation. Authority and Responsibility relationships:
Centralization -Decentralization-Departmentation.

**Unit-IV** 12hrs
Staffing: Recruitment-Meaning –Sources of Recruitment - Selection-Meaning- Selection
Gregor’s X&Y Theories- Types of Motivation. Direction- Meaning- Elements- Importance of
Direction - Techniques of Direction -Span of Control Factors Determining Span of Control-
Qualities of a Good Supervision.

**Unit-V** 12hrs
Leadership- Meaning- Nature- Need- Types of Leaders- Qualities of Leadership. Control-
Meaning- Control Process- Tools of Control- Characteristics of Good Control System- Co-
Ordination- Meaning- Determinants of Co-Ordination Need- Co-Ordination Mechanism-
Techniques.
TEXT BOOK

REFERENCE BOOKS

Semester – VI
Elective – III: C: BUSINESS INTELLIGENCE
Credits: 5
Course Code: N5BIT6T42
Total Instructional Hours: 60

UNIT – I
Hrs: 12 hrs
Introduction to business intelligence and business decisions – Data warehouses and its role in Business Intelligence – Creating a corporate data warehouse – Data Warehousing architecture – OLAP vs. OLTP - ETL process – Tools for Data Warehousing – Data Mining – KDD Process

UNIT – II
Hrs: 12 hrs
Applications of Data Mining in Business – Data Mining Techniques for CRM – Text Mining in BI - Web Mining – Mining e-commerce data – Enterprise Information Management - Executive Information Systems

UNIT – III
Hrs: 12 hrs

UNIT – IV
Hrs: 12 hrs

UNIT – V
Hrs: 12 hrs
Web Analytics and Business Intelligence – eCRM - Case Study: Web Trends – Boeing – EverBank – China Eastern

TEXT BOOKS:
Semester – VI  
Elective – III: D: BUSINESS PROCESS OUTSOURCING

Credits: 5  
Course Code: N5BIT6T42  
Total Instructional Hours: 60

Objective: To understand the various activities engaged by BPO domains  
Skill sets to be acquired: To understand the company activities of BPO.

UNIT – I  
Hrs: 12  

UNIT – II  
Hrs: 12  

UNIT – III  
Hrs: 12  

UNIT – IV  
Hrs: 12  

UNIT – V  
Hrs: 12  

TEXT BOOKS:


REFERENCE BOOK:

2. AUTONOMOUS RULES AND REGULATIONS
CURRICULUM STRUCTURE OF UG PROGRAMS
(2014 – 15 Batch onwards)

PART - I

a. Tamil Or b. Hindi Or c. Malayalam Or d. French

PART - II

English

PART - III

1. Core
2. Allied
3. Electives
4. Job Oriented Course

1. Environmental Studies, Value Education and Human Rights
2. a) Basic Tamil for New Learners Or b) Advanced Tamil
3. Non – Major Electives / Skill Based Courses
4. c) English for Competency -I / General Knowledge & English for Competency -II

PART - IV

1. Extension Activities
   1. Yoga
   2. NSS / Sports

PART - V

ADDITIONAL PROGRAMS

UGC Add-on Programs And Certificate Program in COMMUNICATIVE English
1. **Pattern of Examinations:**

The college follows semester pattern. Each academic year consists of two semesters and each semester ends with the End Semester Examination. A student should have a minimum of 75% attendance out of 90 working days to become eligible to appear for the examinations.

2. **Internal Examinations:**

The questions for every examination shall have equal representation from the units of syllabus covered. The question paper pattern and coverage of syllabus for each of the internal (CIA) tests are as follows.

**First Internal Assessment Test for courses other than Part IV-Non Major Electives: English for Competency – I, General Knowledge and English for Competency - II**

<table>
<thead>
<tr>
<th>Syllabus</th>
<th>: First Two Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Working Days</td>
<td>: On completion of 30 working days, approximately</td>
</tr>
<tr>
<td>Duration</td>
<td>: Two Hours</td>
</tr>
<tr>
<td>Max. Marks</td>
<td>: 50</td>
</tr>
</tbody>
</table>

For the First internal assessment test, the question paper pattern to be followed as given below:

**Question Paper Pattern**

**Section A**

Attempt all questions (three each from both units)

06 questions – each carrying one mark

Multiple Choice

**Section B**

Attempt all questions (two each from both units)

04 questions – each carrying five marks

Inbuilt Choice [Either / Or]

**Section C**

Attempt all questions

(Minimum one question shall be asked from each unit)

03 questions - each carrying eight marks

Inbuilt Choice [Either / Or]

(Reduce these marks to a maximum of 05 i.e., \((\text{Marks obtained}/50) \times 5 \rightarrow A\))

**Second Internal Assessment Test for courses other than Part IV-Non Major Elective: English for Competency – I, General Knowledge and English for Competency - II**

<table>
<thead>
<tr>
<th>Syllabus</th>
<th>: Third &amp; Fourth Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Working Days</td>
<td>: On completion of 60 working days, approximately</td>
</tr>
</tbody>
</table>
Duration : Two Hours  
Max. Marks : 50

For the First internal assessment test, the question paper pattern to be followed as given below:

**Question Paper Pattern**

**Section A**
Attempt all questions (three each from both units)  
06 questions – each carrying one mark  
Multiple Choice  
06 X 01 = 06

**Section B**
Attempt all questions (two each from both units)  
04 questions – each carrying five marks  
Inbuilt Choice [Either / Or]  
04 X 05 = 20

**Section C**
Attempt all questions  
(Minimum one question shall be asked from each unit)  
03 questions - each carrying eight marks  
Inbuilt Choice [Either / Or]  
03 X 08 = 24

(Reduce these marks to a maximum of 05 i.e., (Marks obtained/50) X 5 \(\rightarrow\) B)

**Model Examinations for courses other than**  
**Part IV-Non Major Elective: English for Competency – I, General Knowledge and English for Competency - II**

**Syllabus** : All Five Units  
**Working Days** : On completion of 85 working days approximately,  
**Duration** : Three Hours  
**Max. Marks** : 75

For the Model Examinations, the question paper pattern to be followed as given below:

**Question Paper Pattern**

**Section A**
Attempt all questions  
10 questions – each carrying one mark  
Multiple Choice  
10 X 01 = 10

**Section B**
Attempt all questions  
(Minimum one question shall be asked from each unit)  
05 questions – each carrying five marks  
Inbuilt Choice [Either / Or]  
05 X 05 = 25

**Section C**
Attempt all questions  
(Minimum one question shall be asked from each unit)
05 questions - each carrying eight marks  

\[05 \times 08 = 40\]

Inbuilt Choice [Either / Or]

(Reduce these marks to a maximum of 05 i.e., (Marks obtained/75) \times 10 \rightarrow C)

Assignments

Each student is expected to submit at least two assignments per course. The assignment topics will be allocated by the course teacher. The students are expected to submit the first assignment before the commencement of first Internal Assessment Test and the second assignment before the commencement of second Internal Assessment Test. **Photo copies will not be accepted for submission.**

**Scoring pattern for Assignments**

<table>
<thead>
<tr>
<th>Punctual Submission</th>
<th>: 2 Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contents</td>
<td>: 4 Marks</td>
</tr>
<tr>
<td>Originality/Pres. sk</td>
<td>: 4 Marks</td>
</tr>
<tr>
<td>Maximum</td>
<td>: 10 Marks x 2 Assignments = 20 marks</td>
</tr>
</tbody>
</table>

(Reduce these marks to a maximum of 5 i.e., (Marks obtained / 20) \times 5 \rightarrow D)

**Attendance Mark**

<table>
<thead>
<tr>
<th>Attendance Range</th>
<th>Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>96 % and above</td>
<td>5 Marks</td>
</tr>
<tr>
<td>91 % &amp; up to 95 %</td>
<td>4 Marks</td>
</tr>
<tr>
<td>86% &amp; up to 90 %</td>
<td>3 Marks</td>
</tr>
<tr>
<td>81% &amp; up to 85 %</td>
<td>2 Marks</td>
</tr>
<tr>
<td>From 75 % to 80%</td>
<td>1 Mark</td>
</tr>
<tr>
<td>Maximum</td>
<td>5 Marks (====\rightarrow E)</td>
</tr>
</tbody>
</table>

**Calculation of Internal Marks for courses other than Part IV-Non Major Elective: English for Competency – I & General Knowledge and English for Competency – II**

1. Internal Assessment Test : Best of the two tests.  
   Reduced to a Maximum of 05 Marks (A+B/2)

2. Model Examination : Reduced to a Maximum of 10 Marks (C)

3. Assignment : Reduced to a Maximum of 05 Marks (D)
4. Attendance: Reduced to a Maximum of 05 Marks (E)

Internal marks scored = \((A + B)/2 + C + D + E\) = 25 Marks

The calculation procedure of the Internal Marks for courses which have exclusive internal assessment such as Environmental Studies, etc. in the following pattern.

- a. Average of Two Cycle tests - For a maximum of 20 Marks
- b. Model Examinations - For a maximum of 25 Marks
- c. Attendance Marks - For a maximum of 5 Marks

Total - For a maximum of 50 Marks

The calculation procedure of internal assessments marks for practical examinations are based on the following criteria. The assessment is for 40% marks of each practical course.

- a. Record - For a maximum of 8 Marks
- b. Average of Two Cycle tests - For a maximum of 10 Marks
- c. Model Examinations - For a maximum of 10 Marks
- d. Average Lab performance - For a maximum of 12 Marks

Total - For a maximum of 40 Marks

The internal assessments mark for project evaluation is based on the following criteria. The assessment is for 40% marks of each project/research work/dissertation course.

- a. I Review - For a maximum of 10 Marks
- b. Pre-Final review - For a maximum of 15 Marks
- c. Final review - For a maximum of 15 Marks

Total - For a maximum of 40 Marks

Evaluation system for Part-IV Non Major Elective Course

The question paper pattern given below shall be followed for Part IV-Non Major Elective:

English for Competency – I. There is no internal mark for this course.
First Internal Assessment Test
Syllabus: First Two Units
Working Days: On completion of 30 working days, approximately
Duration: Two Hours
Max. Marks: 50

Question Paper Pattern

Section A
Attempt all questions (twenty five each from both units)
100 questions – each carrying half mark
50 X 01 = 50

Second Internal Assessment Test
Syllabus: Third and Fourth Units
Working Days: On completion of 65 working days approximately
Duration: Two Hours
Max. Marks: 50

Question Paper Pattern

Section A
Attempt all questions
06 questions – each carrying one mark
06 X 01 = 06
Multiple Choice

Section B
Attempt all questions (two each from both units)
04 questions – each carrying five marks
04 X 05 = 20
Inbuilt Choice [Either / Or]

Section C
Attempt all questions
(Minimum one question shall be asked from each unit)
03 questions - each carrying eight marks
03 X 08 = 24
Inbuilt Choice [Either / Or]
Model Examinations

Syllabus: All Five Units
Working Days: On completion of 85 working days approximately.
Examination: Commences any day from 86th working day to 90th working day.
Duration: Three Hours
Max. Marks: 75

Question Paper Pattern

Section A
Attempt all questions
10 questions – each carrying one mark \(10 \times 01 = 10\)

Multiple Choice

Section B
Attempt all questions
05 questions – each carrying five marks \(05 \times 05 = 25\)
Inbuilt Choice [Either / Or]

Section C
Attempt all questions
05 questions – each carrying eight marks \(05 \times 08 = 40\)
Inbuilt Choice [Either / Or]

Evaluation system for Part-IV Non Major Elective Course
The question paper pattern given below shall be followed for Part IV-Non Major Elective: General Knowledge and English for Competency – II for all UG programs. There is no internal mark for this course

First Internal Assessment Test

Syllabus: First Two Units
Working Days: On completion of 30 working days, approximately
Duration: Two Hours
Max. Marks: 50
Question Paper Pattern

Section A
Attempt all questions (twenty five each from both units)
100 questions – each carrying half mark $ 50 \times 0.1 = 50$

Second Internal Assessment Test
Syllabus : Third and Fourth Units
Working Days: On completion of 65 working days approximately,
Duration : Two Hours
Max. Marks : 50

Question Paper Pattern

Section A
Attempt all questions (from Unit III)
40 questions – each carrying half mark $20 \times 0.1 = 20$
Multiple Choice

Section B
Attempt all questions (from Unit IV)
06 questions – each carrying five marks $06 \times 0.5 = 30$
Inbuilt Choice [Either / Or]

Model Examinations
Syllabus : All Five Units
Working Days : On completion of 85 working days approximately,
Examination : Commences any day from 86th working day to 90th working day.
Duration : Three Hours
Max. Marks : 75

Question Paper Pattern

Section A
Attempt all questions (from Unit I,II & III)
40 questions – each carrying one mark $40 \times 0.1 = 40$
Multiple Choice
Section B
Attempt all questions (from Unit IV & V)
05 questions – each carrying five marks $07 \times 05 = 35$

3. External Examinations:

The external examinations for theory courses will be conducted for 75% marks, for all UG and PG degree programs. The external theory examinations will be conducted only after the completion of 90 working days in each semester.

Normally, the external practical examinations will be conducted before the commencement of theory examinations. Under exceptional conditions these examinations may be conducted after theory examinations are over. The external evaluation will be for 60% marks of each practical course.

The external viva voce examinations Research / project works also will be conducted before the commencement of theory examinations. Under exceptional conditions these examinations may be conducted after theory examinations are over. The external assessment is for 60% marks of the project / research work / Dissertation.

End Semester Examination for courses other than Part IV-Non Major Elective: English for Competency – I & General Knowledge and English for Competency – II, in UG and Parallel Programs

Syllabus: All Five Units
Working Days: On completion of a minimum of 90 working days.
Duration: Three Hours
Max. Marks: 75

Question Paper Pattern

Section A
Attempt all questions
10 questions – each carrying one mark $10 \times 01 = 10$
Multiple Choice

Section B
Attempt all questions
(Minimum one question shall be asked from each unit)
05 questions – each carrying five marks $05 \times 05 = 25$
Inbuilt Choice [Either / Or]

Section C
Attempt all questions
(Minimum one question shall be asked from each unit)
05 questions – each carrying eight marks $05 \times 08 = 40$
Inbuilt Choice [Either / Or]
End Semester Examination  
**Part IV**-Non Major Elective: English for Competency – I

**Syllabus**: All Five Units  
**Working Days**: On completion of a minimum of 90 working days.  
**Duration**: Three Hours  
**Max. Marks**: 75

**Question Paper Pattern**

**Section A**
Attempt all questions  
10 questions – each carrying one mark  
10 X 01 = 10  
Multiple Choice

**Section B**
Attempt all questions  
05 questions – each carrying five marks  
05 X 05 = 25  
Inbuilt Choice [Either / Or]

**Section C**
Attempt all questions  
05 questions – each carrying eight marks  
05 X 08 = 40  
Inbuilt Choice [Either / Or]

End Semester Examination  
**Part IV**-Non Major Elective: General Knowledge and English for Competency – II

**Syllabus**: All Five Units  
**Working Days**: On completion of a minimum of 90 working days.  
**Duration**: Three Hours  
**Max. Marks**: 75

**Question Paper Pattern**

**Section A**
Attempt all questions (from Unit I,II & III)  
40 questions – each carrying one mark  
40 X 01 = 40  
Multiple Choice

**Section B**
Attempt all questions (from Unit IV & V)  
05 questions – each carrying five marks  
07X 05 = 35
4. Essential conditions for the Award of Degree / Diploma / Certificates:


2. First class with Distinction and above will be awarded for part III only. Ranking will be based on marks obtained in Part – III only.

3. GPA (Grade Point Average) will be calculated every semester separately. If a candidate has arrears in a course, then GPA for that particular course will not be calculated. The CGPA will be calculated for those candidates who have no arrears at all. The ranking also will be done for those candidates without arrears only.

4. The improvement marks will not be taken for calculating the rank. In the case of courses which lead to extra credits also, they will neither be considered essential for passing the degree nor will be included for computing ranking, GPA, CGPA etc.

5. The grading will be awarded for the total marks of each course.

6. Fees shall be paid for all arrears courses compulsorily.

7. There is provision for re-totaling and revaluation for UG and PG programmes on payment of prescribed fees.

5. Classification of Successful Candidates [Course-wise]:

<table>
<thead>
<tr>
<th>RANGE OF MARKS (In percent)</th>
<th>GRADE POINTS</th>
<th>GRADE</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>90 - 100</td>
<td>9.0 - 10.0</td>
<td>O</td>
<td>OUTSTANDING</td>
</tr>
<tr>
<td>80 - 89</td>
<td>8.0 - 8.9</td>
<td>D+</td>
<td>EXCELLENT</td>
</tr>
<tr>
<td>75 - 79</td>
<td>7.5 - 7.9</td>
<td>D</td>
<td>DISTINCTION</td>
</tr>
<tr>
<td>70 – 74</td>
<td>7.0 - 7.4</td>
<td>A+</td>
<td>VERY GOOD</td>
</tr>
<tr>
<td>60 – 69</td>
<td>6.0 - 6.9</td>
<td>A</td>
<td>GOOD</td>
</tr>
<tr>
<td>50 – 59</td>
<td>5.0 - 5.9</td>
<td>B</td>
<td>AVERAGE</td>
</tr>
<tr>
<td>40 – 49 #</td>
<td>4.0 - 4.9</td>
<td>C</td>
<td>SATISFACTORY</td>
</tr>
<tr>
<td>00 – 39</td>
<td>0.0</td>
<td>U</td>
<td>RE-APPEAR</td>
</tr>
<tr>
<td>ABSENT</td>
<td>0.0</td>
<td>U</td>
<td>ABSENT</td>
</tr>
</tbody>
</table>

Reappearance is necessary for those who score below 50% Marks in PG **;
those who score below 40% Marks in UG*;
# only applicable for UG programs
Individual Courses

$C_i = \text{Credits earned for course } \text{“}i\text{” in any semester}$

$G_i = \text{Grade Point obtained for course } \text{“}i\text{” in any semester}$

‘$n$’ refers to the semester in which such courses were credited.

**GRADE POINT AVERAGE [GPA]**

\[ \text{GPA} = \frac{\sum C_i G_i}{\sum C_i} \]

Sum of the multiplication of grade points by the credits of the courses

Sum of the credits of the courses in a semester

6. Classification of Successful Candidates (overall):

<table>
<thead>
<tr>
<th>CGPA</th>
<th>GRADE</th>
<th>CLASSIFICATION OF FINAL RESULT</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.5 to 10.0</td>
<td>O+</td>
<td>First Class - Exemplary *</td>
</tr>
<tr>
<td>9.0 and above but below 9.5</td>
<td>O</td>
<td>First Class with Distinction *</td>
</tr>
<tr>
<td>8.5 and above but below 9.0</td>
<td>D++</td>
<td>First Class with Distinction *</td>
</tr>
<tr>
<td>8.0 and above but below 8.5</td>
<td>D+</td>
<td>First Class with Distinction *</td>
</tr>
<tr>
<td>7.5 and above but below 8.0</td>
<td>D</td>
<td>First Class</td>
</tr>
<tr>
<td>7.0 and above but below 7.5</td>
<td>A++</td>
<td>First Class</td>
</tr>
<tr>
<td>6.5 and above but below 7.0</td>
<td>A+</td>
<td>First Class</td>
</tr>
<tr>
<td>6.0 and above but below 6.5</td>
<td>A</td>
<td>First Class</td>
</tr>
<tr>
<td>5.5 and above but below 6.0</td>
<td>B+</td>
<td>Second Class</td>
</tr>
<tr>
<td>5.0 and above but below 5.5</td>
<td>B</td>
<td>Second Class</td>
</tr>
<tr>
<td>4.5 and above but below 5.0</td>
<td>C+ #</td>
<td>Third Class</td>
</tr>
<tr>
<td>4.0 and above but below 4.5</td>
<td>C #</td>
<td>Third Class</td>
</tr>
<tr>
<td>0.0 and above but below 4.0</td>
<td>U</td>
<td>Re-appear</td>
</tr>
</tbody>
</table>

“*” The candidates who have passed in the first appearance and within the prescribed semester of the Programme (Major, Allied and Elective Course alone) are eligible.

“#” Only applicable to U.G. Programme

**CUMULATIVE GRADE POINT AVERAGE [CGPA]**

\[ \text{CGPA} = \frac{\sum n \sum C_i n_i G_i n_i}{\sum n \sum C_i n_i} \]

Sum of the multiplication of grade points by the credits
CGPA = \[ \frac{\text{Sum of the Courses of entire Program}}{\text{of the entire program}} \]

**Sum of the Courses of entire Program**

In order to get through the examination, each student has to earn the minimum marks prescribed in the internal (wherever applicable) and external examinations in each of the theory course, practical course and project viva.

Normally, the ratio between internal and external marks is 25:75. There is no passing minimum for internal component. The following are the minimum percentage and marks for passing of each course, at UG and PG levels for external and aggregate is as follows:

<table>
<thead>
<tr>
<th>S.No</th>
<th>Program</th>
<th>Passing Minimum in Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>External (75)</td>
</tr>
<tr>
<td>1</td>
<td>UG Degree</td>
<td>40% (30)</td>
</tr>
<tr>
<td>2</td>
<td>PG Degree</td>
<td>50% (38)</td>
</tr>
</tbody>
</table>

However, the passing minimum marks may vary depending up on the maximum marks of each course. The passing minimum at different levels of marks is given in the following table:

<table>
<thead>
<tr>
<th>S. No</th>
<th>UG &amp; PG Maximum Marks</th>
<th>Passing minimum for UG</th>
<th>Passing minimum for PG</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Int.</td>
<td>Ext.</td>
<td>Total</td>
</tr>
<tr>
<td>1</td>
<td>25</td>
<td>75</td>
<td>100</td>
</tr>
<tr>
<td>2</td>
<td>50</td>
<td>150</td>
<td>200</td>
</tr>
<tr>
<td>3</td>
<td>40</td>
<td>60</td>
<td>100</td>
</tr>
<tr>
<td>4</td>
<td>80</td>
<td>120</td>
<td>200</td>
</tr>
<tr>
<td>5</td>
<td>80</td>
<td>20</td>
<td>100</td>
</tr>
<tr>
<td>6</td>
<td>160</td>
<td>40</td>
<td>200</td>
</tr>
<tr>
<td>7</td>
<td>15</td>
<td>60</td>
<td>75</td>
</tr>
<tr>
<td>8</td>
<td>50</td>
<td>-</td>
<td>50</td>
</tr>
<tr>
<td>9</td>
<td>-</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>10</td>
<td>-</td>
<td>75</td>
<td>75</td>
</tr>
</tbody>
</table>

**7. Reappearance:**

The students having arrears shall appear in the subsequent semester (external) examinations compulsorily. The candidates may be allowed to write the examination in the same syllabus for 3 years only. Thereafter, the candidates shall be permitted to write the examination in the revised /
current syllabus depending on various administrative factors. There is no re-examination for internals.

8. **Criteria for Ranking of Students:**
1. Marks secured in all the courses will be considered for PG Programs and marks secured in core and allied courses (Part-III) will be considered for UG programs, for ranking of students.
2. Candidate must have passed all courses prescribed chosen / opted in the first attempt itself.
3. Improvement marks will not be considered for ranking but will be considered for classification.

9. **External Examination Grievances Committee:**

Those students who have grievances in connection with examinations may represent their grievances, in writing, to the chairman of examination grievance committee in the prescribed proforma. The Principal will be chairman of this committee.
Student Grievance Form

From
Register No : …………………………………………..,
Name : …………………………………………..,
Class : …………………………………………..,
Sree Saraswathi Thyagaraja College,
Pollachi – 642 107.

To
The Principal / Examination-in-charge,
Sree Saraswathi Thyagaraja College,
Pollachi – 642 107.

Through: 1. Head of the Department,
Department of ……………….……….,
Sree Saraswathi Thyagaraja College,
Pollachi – 642 107.

2. Dean of the Department
Faculty of ……………………………….,
Sree Saraswathi Thyagaraja College,
Pollachi – 642 107.

Respected Sir / Madam,
Sub: ………………………………………………………………………………... - reg.

NATURE OF GRIEVANCE: ………………………………………………………………………
………………………………………………………………………………………………
………………………………………………………………………………………………
………………………………………………………………………………………………

Thanking you,
Yours Truly,

Forwarded by:
1. HOD with comments / recommendation
………………………………………………………………………………………………

2. Dean with comments / recommendation
………………………………………………………………………………………………

3. Signature and Directions of the Principal
………………………………………………………………………………………………

4. Controller of Examinations:
………………………………………………………………………………………………