Faculty of Social Science & Humanities

Study and Evaluation Scheme

Of

Bachelor of Arts (With Computer Appli.)

B.A. (With CA)

(Applicable w.e.f Academic Session 2015-18, till revised)

AKS UNIVERSITY, SATNA

Study and Evaluation Scheme

** The University Authorities reserve all the rights to make any additions/ deletions or changes/ modifications to this syllabus as deemed necessary
Faculty of Social Sciences & Humanities  
Bachelor of Arts (Computer Applications)  
I Semester  
Credit & Evaluation Scheme

<table>
<thead>
<tr>
<th>S.N.</th>
<th>Subject Code</th>
<th>Subject Name</th>
<th>Periods</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>L</td>
<td>T</td>
</tr>
<tr>
<td>1.</td>
<td>66CA101</td>
<td>Fundamentals of Computer</td>
<td>4</td>
<td>-</td>
</tr>
<tr>
<td>2.</td>
<td>66CA102</td>
<td>Information Security &amp; Cyber Law</td>
<td>4</td>
<td>-</td>
</tr>
<tr>
<td>3.</td>
<td>66EC103</td>
<td>Micro Economics</td>
<td>4</td>
<td>-</td>
</tr>
<tr>
<td>4.</td>
<td>66PS104</td>
<td>Political Theory</td>
<td>4</td>
<td>-</td>
</tr>
<tr>
<td>5.</td>
<td>66FC105</td>
<td>English Communication</td>
<td>3</td>
<td>-</td>
</tr>
<tr>
<td>6.</td>
<td>66CA151</td>
<td>Fundamentals of Computer (Lab)</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Total</strong></td>
<td><strong>19</strong></td>
<td>-</td>
</tr>
</tbody>
</table>

Bachelor of Arts (Computer Applications)  
II Semester  
Credit & Evaluation Scheme

<table>
<thead>
<tr>
<th>S.N.</th>
<th>Subject Code</th>
<th>Subject Name</th>
<th>Periods</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>L</td>
<td>T</td>
</tr>
<tr>
<td>1.</td>
<td>66CA201</td>
<td>C Programming</td>
<td>4</td>
<td>-</td>
</tr>
<tr>
<td>2.</td>
<td>66CA202</td>
<td>System Analysis &amp; Design</td>
<td>4</td>
<td>-</td>
</tr>
<tr>
<td>3.</td>
<td>66EC203</td>
<td>Indian Economy</td>
<td>4</td>
<td>-</td>
</tr>
<tr>
<td>4.</td>
<td>66PS204</td>
<td>Indian Government and Politics</td>
<td>4</td>
<td>-</td>
</tr>
<tr>
<td>5.</td>
<td>66EV205</td>
<td>Environmental Science</td>
<td>3</td>
<td>-</td>
</tr>
<tr>
<td>6.</td>
<td>66CA251</td>
<td>C Programming (Lab)</td>
<td>-</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Total</strong></td>
<td><strong>19</strong></td>
<td>-</td>
</tr>
</tbody>
</table>
### III Semester

#### Credit & Evaluation Scheme

<table>
<thead>
<tr>
<th>S.N.</th>
<th>Subject Code</th>
<th>Subject Name</th>
<th>Periods</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>L  T   P</td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>66CA301</td>
<td>OBJECT ORIENTED PROGRAMMING IN C++</td>
<td>4 - -</td>
<td>4</td>
</tr>
<tr>
<td>2.</td>
<td>66CA302</td>
<td>Internet and its applications</td>
<td>4 - -</td>
<td>4</td>
</tr>
<tr>
<td>3.</td>
<td>66EC303</td>
<td>Macro Economics and Money and Banking</td>
<td>4 - -</td>
<td>4</td>
</tr>
<tr>
<td>4.</td>
<td>66PS304</td>
<td>REPRESENTATIVE POLITICAL THINKERS</td>
<td>4 - -</td>
<td>4</td>
</tr>
<tr>
<td>5.</td>
<td>66SS305</td>
<td>Spiritual Studies</td>
<td>3 - -</td>
<td>3</td>
</tr>
<tr>
<td>6.</td>
<td>66CA351</td>
<td>Object Oriented Programming in C++(Lab)</td>
<td>- 3 -</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Total</strong></td>
<td><strong>19</strong></td>
<td><strong>21</strong></td>
</tr>
</tbody>
</table>

### IV Semester

#### Credit & Evaluation Scheme

<table>
<thead>
<tr>
<th>S.N.</th>
<th>Subject Code</th>
<th>Subject Name</th>
<th>Periods</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>L  T   P</td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>66CA401</td>
<td>Digital Electronics</td>
<td>4 1 0</td>
<td>5</td>
</tr>
<tr>
<td>2.</td>
<td>66CA402</td>
<td>HTML and Web Designing</td>
<td>4 - 0</td>
<td>4</td>
</tr>
<tr>
<td>3.</td>
<td>66EC403</td>
<td>International Economics and Public Finance</td>
<td>4 - -</td>
<td>4</td>
</tr>
<tr>
<td>4.</td>
<td>66PS404</td>
<td>COMPARATIVE GOVERNMENT AND POLITICS</td>
<td>4 - -</td>
<td>4</td>
</tr>
<tr>
<td>5.</td>
<td>66EN405</td>
<td>Entrepreneurship</td>
<td>3 - -</td>
<td>3</td>
</tr>
<tr>
<td>6.</td>
<td>66CA451</td>
<td>HTML and Web Designing</td>
<td>0 - 2</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Total</strong></td>
<td><strong>19</strong></td>
<td><strong>21</strong></td>
</tr>
</tbody>
</table>
### V Semester

**Credit & Evaluation Scheme**

<table>
<thead>
<tr>
<th>S.N.</th>
<th>Subject Code</th>
<th>Subject Name</th>
<th>Periods</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>L</td>
<td>T</td>
</tr>
<tr>
<td>1.</td>
<td>66CA501</td>
<td>Basic Computer Hardware</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>2.</td>
<td>66CA502</td>
<td>DATABASE MANAGEMENT SYSTEM</td>
<td>4</td>
<td>-</td>
</tr>
<tr>
<td>3.</td>
<td>66CA503</td>
<td>Data Structure</td>
<td>4</td>
<td>-</td>
</tr>
<tr>
<td>4.</td>
<td>66EC504</td>
<td>Development and Environment</td>
<td>4</td>
<td>-</td>
</tr>
<tr>
<td>5.</td>
<td>66PS505</td>
<td>India and International Politics</td>
<td>4</td>
<td>-</td>
</tr>
<tr>
<td>1</td>
<td>66CA551</td>
<td>Data Structure</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>66CA552</td>
<td>DATABASE MANAGEMENT SYSTEM (Lab)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Total</strong></td>
<td>20</td>
<td>0</td>
</tr>
</tbody>
</table>

### VI Semester

**Credit & Evaluation Scheme**

<table>
<thead>
<tr>
<th>S.N.</th>
<th>Subject Code</th>
<th>Subject Name</th>
<th>Periods</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>L</td>
<td>T</td>
</tr>
<tr>
<td>1</td>
<td>66CA601</td>
<td>Multimedia tools and application</td>
<td>4</td>
<td>-</td>
</tr>
<tr>
<td>2</td>
<td>66CA602</td>
<td>PHP Programming</td>
<td>4</td>
<td>-</td>
</tr>
<tr>
<td>3</td>
<td>66CA603</td>
<td>Operating Systems</td>
<td>4</td>
<td>-</td>
</tr>
<tr>
<td>4</td>
<td>66EC604</td>
<td>Quantitative Techniques</td>
<td>4</td>
<td>-</td>
</tr>
<tr>
<td>5</td>
<td>66PS605</td>
<td>Public Administration</td>
<td>4</td>
<td>-</td>
</tr>
<tr>
<td>6</td>
<td>66CA651</td>
<td>Multimedia tools and application (Lab)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>7</td>
<td>66CA652</td>
<td>PHP Programming (Project Lab)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Total</strong></td>
<td>20</td>
<td>-</td>
</tr>
</tbody>
</table>
**Objective:** This course has been taught to the student to aware them about the computer and how it operates, to make documents.

**Unit-I**


**Unit-II**


**Unit- III**

**MS Word 2007:** Word basics, formatting text and documents, working with headers, footers and footnotes, tabs, tables and sorting, Working with graphics, templates, and introduction to mail merge.

**MS Power Point 2007:** Power Point basics, creating presentation the easy way, working with graphics, Inserting various objects (Picture, Organizational Chart, Audio, Video etc) in slide, Adding Animation effects in slide.

**Unit-IV**

**MS Excel 2007:** Excel basics, rearranging worksheets, excel formatting tips and techniques, Introduction to functions; Excel chart features, working with graphics, Using worksheet as a Database.

**Unit-IV**

**MS Access 2007:** Database creation, screen/form design, Data Export-import. Report generation using wizard, **Introduction to Networking:** Advantage of Networking: Basic Features, LAN, WAN, MAN, Topologies.

**Advance Topics:** WWW, Internet.

**Text Books:-**


**Reference Books:**

1. Manish Mahajan IT Infrastructure & Management Achme learning.
Unit I - Course Introduction: Computer network as a threat, hardware vulnerability, software vulnerability, importance of data security.


Unit II - Information Gathering Techniques: Tools of the attacker, information and cyber warfare, scanning and spoofing, password cracking, malicious software, session hijacking

Unit III - Risk Analysis and Threat: Risk analysis, process, key principles of conventional computer security, security policies, authentication, data protection, access control, internal vs external threat, security assurance, passwords, authentication, and access control, computer forensics and incident response

Unit IV - Introduction to Cryptography and Applications: Important terms, Threat, Flaw, Vulnerability, Exploit, Attack, Ciphers, Codes, Caeser Cipher, Rail-Fence Cipher, Public key cryptography (Definitions only), Private key cryptography (Definition and Example)

Unit V - Safety Tools and Issues: Firewalls, logging and intrusion detection systems, Windows and windows XP / NT security, Unix/Linux security, ethics of hacking and cracking

Cyber laws to be covered as per IT 2008:

- Chapter 1: Definitions
- Chapter 2: Digital Signature And Electronic Signature
- [Section 43] Penalty and Compensation for damage to computer, computer system, etc.
- [Section 65] Tampering with Computer Source Documents
- [Section 66 A] Punishment for sending offensive messages through communication service, etc.
- [Section 66 B] Punishments for dishonestly receiving stolen computer resource or communication device
- [Section 66C] Punishment for identity theft
- [Section 66D] Punishment for cheating by personation by using computer resource
- [Section 66E] Punishment for violation of privacy
- [Section 66F] Punishment for cyber terrorism
[Section 67] Punishment for publishing or transmitting obscene material in electronic form

[Section 67A] Punishment for publishing or transmitting of material containing sexually explicit act, etc. in electronic form

[Section 67B] Punishment for publishing or transmitting of material depicting children in sexually explicit act, etc. in electronic form

[Section 72] Breach of confidentiality and privacy
B. A. Computer (I Semester)

Subject – Economics
(Micro Economics)


Unit-3 - Production – Laws of Production, Law of Variable Proportions, Return to Scale, Economies of Scale, Iso-quants – Meaning and Characteristics, Concepts of Cost and Revenue – Total, Marginal & Average.


Unit-5 - Factor Pricing - Theory of Marginal Productivity of Distribution, Classical and Modern Theories of Wages, Rent, Interest and Profit.

Recommended Books:

- Ahuja H.L. Advance Economic theory Jain K.P. Advance Economic theory
- Jhingan M.L. Modern Micro Economics
- Seth M L Micro Economics
- f> axu ,e-,y vk/kqfud O:f”Vd vFkZ’kkL=
- 1 sB ,e-,y ekbd zks vFkZ’kkL=
B. A. Computer (I Semester)

Subject – Political Science
(Political Theory)

Unit-I - Political Science – Definition, nature and scope Nature and significance of Political Theory. Methods: Traditional and Modern; Relations with other social sciences: Sociology, History, Economics, Psychology and Geography.


Unit-III - Rights and Duties; Liberty, Equality and Justice. Democracy: Meaning, Types and Theories of Democracy, Theories of Representation and Welfare state.


Recommended Books:

1. Ashirvadam E0 Modern Political Theory
2. Sir E. Barker- Principles of Social and Political Theory Calcutta Oxford University 1976
3. Loski H.J. – A Grammar of Poltics0 London Allan University
5. Tripti Jain- Foundation of Politics – College Book Depot.
7. Prof. A.D. Panth- Basis of Political Science Allahabad Publisher.
8. Dr. Om Nagpal- Fundamentals of Political Science, Kamal Publisher Indore.
B. A. Computer (I Semester)

Subject – Foundation Course

(English Communication)

1. **Introduction**: Theory of Communication, Types and modes of Communication.

2. **Language of Communication**: Verbal and Non-verbal (Spoken and Written), Personal, Social and Business, Barriers and Strategies, Intra-personal, Inter-personal and Group communication.

3. **Speaking Skills**: Monologue, Dialogue, Group Discussion, Effective Communication/ Mis-Communication, Interview, Public Speech.

4. **Reading and Understanding**: Close Reading, Comprehension, Summary Paraphrasing, Analysis and Interpretation, Translation (from Indian language to English and vice-versa), Literary/Knowledge Texts.


**Recommended Readings:**

4. Language through Literature (forthcoming) ed. Dr. Gauri Mishra, Dr Ranjana Kaul, Dr Brati Biswas
UNIT – I

Algorithm: An Introduction, Properties of an algorithm, Classification, algorithm logic, flowchart.

Program design and implementation issues: programming system design technique,
Programming technique, basic constructs of structured programming, modular designing of programs,
Creation, compilation, execution of program.

Programming Environment Languages - Low level programming language, Middle level programming
language, High level programming language, object code, source code, executable code, Translator -
assembler, compiler, and interpreter.

UNIT – II

Introduction to the C Language: The C Language and its Advantages, The Structure of a C Program,
Writing and Building an Executable Version of a C Program, Debugging-Examining and Running a C
Program, Character set, Constants, Variables, keywords, identifiers, literals. Storage, classes, type casting.
Basic input & output function – printf( ) and scanf( ), C Instructions And Operators: Types of Instructions,
Data Manipulation Instructions, Input/output Instructions, Operators and its different types, Precedence of
operators.

UNIT – III

Flow control instructions: decision control instructions, if, if-else, if-else-if, nested if-else, loop control
instructions, for loop, while loop, do while, break, continue, case control structure, goto, exit statement.

UNIT – IV

Arrays: what is an array, array declaration, array initialization, accessing individual elements of an
array, two dimensional arrays, passing an array element to a function, rules of using an array.
Strings: what are strings, standard library string function strlen(), strcpy(), strcat(), strcmp(), strrev(), 2D
array of characters and character input output functions.

UNIT – V

Function: Need of function, declaring function, defining, calling function, types of function, parameter
passing.

Structure and Union: Why use structure, declaration of structure, accessing structure elements, how
structure elements are stored, array of structure, uses of structure, declaration of Union, accessing Union
elements.

Advance topics: Pointer, DMA, Command line arguments, the C preprocessor.

Text Books

Reference Books

List of C practical:
1. Write a C program to display Your Name, Address and City in different lines.
2. Write a C program to find the area of a circle using the formula. Area = PI * r^2
3. Write a C program to find the maximum from given three nos.
4. Write a C program to find that the accepted no is Negative, Positive or Zero.
5. Write a C program to convert centigrade into Fahrenheit. Formula: C= (F-32)/1.8.
6. Write a C program to find the sum of digits of accepted no.
7. Write a C program to find the sum of first 100 odd nos. and even nos.
8. Write a C program to display first 25 Fibonacci nos.
9. Write a C program to find factorial of accepted nos.
10. Write a C program to print the accepted no and its reverse no.
11. Write a C program to find whether the accepted string number is palindrome or not.
12. Write a C program to find \( x_1 + x_2 + x_3 + x_4 + \ldots + x_n \).
13. Write a C program to convert decimal to binary.
14. Write a C program to arrange the accepted numbers in ascending order and descending order.
15. Convert given line into upper case or lower case character as user want. Use switch statement for the choice of case.
16. Check accepted integer is prime number or no.
17. Convert accepted integer into word. For Example 55 = fifty five.
18. Convert accepted DATE into word. For Example 12/12/1972 = 12th December 1972.
19. Find the frequency of entered different integer nos.
20. Accept two different arrays, merge it and make it sort in ascending order.
21. Print 3 students detail of R-no, name, address, city, phone on screen. Use structure.
22. Find the NPR, NCR with using User Defined Function. NPR = N! / (N-R)! NCR = N! / (R!*(N-R)).
23. Swap the values of two different numbers using UDF.
24. Display this kind of output on screen.

C
CP
CRR

CPROGRAMING
.
.
.
CPR
CP
C

25. Display this kind of output on screen.

1
01
101
0101

26. Display this kind of output on screen.

1
01
101

27. Display this kind of output on screen.

1
23
456
78910

28. Display this kind of output on screen.
29. Display this kind of output on screen.

```
 *  
**  
***  
****
```

30. Write a program to work as a dos type command using command line argument.

31. Program to show swap of two no’s without using third variable.

32. Program to show the use of conditional operator.

33. Program to find that entered year is leap year or not.

34. Program to find whether given no is even or odd.

35. Program to shift inputted data by two bits to the left.

36. Program to use switch statement, Display Monday to Sunday.

37. Program to display arithmetic operator using switch case.

38. Program to show swap of two no’s without using third variable.

39. Program to show table of a number using functions.

40. Program to show call by value.
UNIT

SYSTEM CONCEPTS: The system concept, Characteristics of system, Elements of system, Types of system, man made information systems. Basic System Development Life Cycle with different users and their role in SDLC.

1 PROCESS MODELS: Different Approaches and Models for System Development. Waterfall Model, Spiral Model, Prototyping, RAD, COCOMO Model, Capability Maturity Model Integration (CMMI).

INITIAL INVESTIGATION AND ANALYSIS: Requirement Investigation & Fact Finding Methods, Types of Requirements - Functional and Non-Functional, Quality criteria, Fundamental problems in defining Requirements, Software requirement Specification (SRS) -Structure and contents of the requirements specification analysis modeling.

2 COST / BENEFITS ANALYSIS: Data analysis, Cost/benefit analysis, categories, determination and system proposal. Software metric

SYSTEM PLANNING AND TOOLS OF STRUCTURED ANALYSIS:
Planning a software project: Defining the problem - Developing a Solution Strategy - Planning the Development Process - Planning an Organization structure - Other Planning Activities.

3 Logical and Physical models, Data flow diagram, Data dictionary, system structured charts, system model. Pseudo codes, Decision tree, Decision tables, HIPO and IPO chart, Gantt charts, Warries diagram, PERT chart

SYSTEM DESIGN: Stages of system design, Logical and physical design methods, Form driven mythologies, Input and output form design methodologies like prompts, menu, screen design, layout consideration, zoning box design


TESTING AND QUALITY ASSURANCE:
Testing Strategies: Strategic Approach to Software Testing, Validation Testing, System Testing, Black-Box Testing, White-Box Testing and their type, Quality assurance, implementation and software maintenance, System security, Disaster, Recovery planning, Ethics in system development

Text Books:

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Name of Book</th>
<th>Edition</th>
<th>Authors’ Name</th>
<th>Publication</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>SYSTEM ANALYSIS AND DESIGN</td>
<td></td>
<td>E. M. AWARD.</td>
<td></td>
</tr>
</tbody>
</table>

Reference Books:

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Name of Book</th>
<th>Edition</th>
<th>Authors’ Name</th>
<th>Publication</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ANALYSIS AND DESIGN OF INFORMATION SYSTEM</td>
<td></td>
<td>J. SENU</td>
<td></td>
</tr>
</tbody>
</table>
Unit-1 –

Unit-2 –

Unit-3 –

Unit-4 –

Unit-5 –

Recommended Books:
- Mishra and Puri - Indian Economy
- Rudra dutt and K.P.M. Sundaram - Indian Economy
- Uma kaila - Indian Economy
- नाथूरामकर – भारतीय अर्थव्यवस्था
- रुद्र दत्त एवं के पी एम सूदरम – भारतीय अर्थव्यवस्था
- ए एन अग्रवाल – भारतीय अर्थव्यवस्था
- मध्य प्रदेश हिंदी ग्रंथ अकादमी की पुस्तकें
B. A. Computer (II Semester)
Subject – Political Science
(Indian Government and Politics)

Unit-I –

Unit-II –
Fundamental Rights and Duties. Directive Principles of State Policy. Union Executive : President, Cabinet, Prime Minister

Unit-III –
Indian Parliament : Lok Sabha, Rajya Sabha. The Supreme Court; Centre State Relations; Election Commission

Unit-IV –
The State Government Executive Governor, Council of Ministers and Chief Minister State Legislature : Legislative Assembly and Legislative Council.

Unit-V –

Recommended Books:
1. A.G. Norani- Constitutional Questions in India the President Parliament and the State, Delhi, Oxford University Press 2000
2. J.C. Johari- Indian Government and Politics; Orient Longmans Publication, New Delhi
4. Rajani Kothari- Politics of India, Orient Longmans Publicational Development of India.
5. Prof. R.N. Agrawal- National Movement and Constitutional Development of India.
6. Prof. Bipin Chandre- Indian National Movement, Vikas Publisher, New Delhi
8. Prof. R.C. Agrawal- Indian National Movement and Indian Constitution
Unit 1: Natural Resources: Lectures 15
Definition, scope and importance, need for public awareness.
Renewable and non-renewable resources:
Natural resources and associated problems.

a) Forest resources: Use and over-exploitation, deforestation, case studies. Timber extraction, mining, dams and their effects on forest 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 over-grazing, 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 energy sources. Case studies.
f) Land resources: Land as a resource, land degradation, man induced landslides, soil erosion and desertification.

- Role of an individual in conservation of natural resources.
- Equitable use of resources for sustainable lifestyles.

Unit 2: Ecosystems: Lectures 10
- Concept of an ecosystem, Structure and function of an ecosystem, Producers, consumers and decomposers.
- Energy flow in the ecosystem, Ecological succession, Food chains, food webs and ecological pyramids.
- Introduction, types, characteristic features, structure and function of the following ecosystems: -
  a. Forest ecosystem b. Grassland ecosystem c. Desert ecosystem
d. Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries)

Unit 3: Biodiversity and its conservation: Lectures 6
- Biogeographical classification of India
- Value of biodiversity: consumptive use, productive use, social, ethical, aesthetic and option values, Biodiversity at global, National and local levels, India as a mega-diversity nation
- Hot-spots of biodiversity: Threats to biodiversity: habitat loss, poaching of wildlife, man-wildlife conflicts, Endangered and endemic species of India
- Conservation of biodiversity: In-situ and Ex-situ conservation of biodiversity.

Unit 4: Environmental Pollution: Lectures 10
Definition Cause, effects and control measures of: -
f. Thermal pollution  g. Nuclear hazards
- Solid waste Management: Causes, effects and control measures of urban and industrial wastes.
- Role of an individual in prevention of pollution. Pollution case studies.
• Diaster management: floods, earthquake, cyclone and landslides.

Unit 5: Social Issues and the Environment  Lectures 10
• From Unsustainable to Sustainable development, Urban problems related to energy
• Water conservation, rain water harvesting, watershed management
• Resettlement and rehabilitation of people; its problems and concerns. Case Studies
• Environmental ethics: Issues and possible solutions.
• Climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust. Case Studies.
• Wasteland reclamation. Consumerism and waste products.

Unit 6: Human Population and the Environment  Lectures 9
Population growth, variation among nations.

• Role of Information Technology in Environment and human health. Case Studies.

Field work  Marks: 50  Practical 10 lectures
• Study of common plants at university campus.
• Visit and study of water treatment plant.
• Visit and study of Waste management process.
• Study of Pond/River ecosystems.
• Study of Water Harvesting and its importance.
• Visit and Study of Mining sites.
• Visit and study local Polluted sites Industrial/Agricultural.
• Visit and study local forest/ hill/mountain.
• Case study of biodiversity of local area.
• Case study of women and child welfare policies in local areas.

Suggested Books:
A text book of Environmental Studies, Erach Bharucha, UGC Publication Delhi
A text book of Environmental science: Purohit Shami & Agrawal, Agrobios Student edition Jaipur
A text book of Environmental Studies: Kaushi & Kaushik New age International Publication
Paryavaran Addhyan : MP Hindi Granth Academy
Paryavaran Addhyan : KL Tiwari and Jadhav
Environmental Studies : Dr. Rajesh Dhankar
Paryavaran Addhyan by: Dr Mahendra Kumar Tiwari University Publication Delhi
B. A. Computer (III Semester)

Subject – Economics

(Macro Economics and Money and Banking)

Unit I –


Unit II –


Unit III –

Investment Function and Marginal Efficiency of Capital (MEC), Factors Affecting Capital Formation Concept of Accelerator, Keynesian Theory of Liquidity Preference, Liquidity Trap.

Unit IV –


Unit V –


Recommended Books:

6. ग्यार्धन : समम्बित अर्थशास्त्र : कोणक ‘ पत्तिकेपन
7. मैकेनिको अर्थशास्त्र– टी.डी. सेंटी
8. हिन्दी ग्रंथ अकादमी की पुस्तकें
B. A. Computer (III Semester)

Subject – Political Science

(REPRESENTATIVE POLITICAL THINKERS)

UNIT –I –
Salient features of Ancient Indian and Western Political Thought; Ideas of Kautilya, Plato and Aristotle.

UNIT –II –
Main features of Medieval Political thought in India. Sufism, St. Simon, Machiavelli.

UNIT –III –
Contractualists: Hobbes, Locke and Rousseau

UNIT –IV –
Socialism : Utopian and Scientific.

UNIT –V –
Thought of Mahatma Gandhi, Dr. B.R. Ambedkar and Dr. Ram Manohar Lohiya.

Recommended Books:

1. A Appadorai, Indian Political Thinking Through the Ages, Delhi : Khanna Publisher 1992.
7. D.B. Majumdaar, Indian Political Thought, College Book Depot.
8. V.P. Verma, Modern Indian Political Thought College Book Depot, Jaipur.
10. Awasthi & Awasthi, Modern Indian Political Thought, Laxmi Narayan Agrawal Publisher, Agra.
11. Barker Earnest, Political Thought, Oxford University, Calcutta.
15. Prabhu Dutt Sharma, Western Political Thought College Book Depot Sabine, A History of Political Thought.
Objective: To familiarize the student with the universal concepts of computer programming. To present the syntax and semantics of the “C++” language as well as basic data types offered by the language. To discuss the principles of the object-oriented model and its implementation in the “C++” language.

Unit – 1

Unit – 2
Introduction to Objects and classes-Defining the class, defining data members and member functions, creating objects, access specifiers-private, public, protected. Nested classes, local classes, empty class. Friend function and friend class. Passing objects as function arguments, returning objects from functions, static members, this pointer, comparison of class with structure. Memory management-new and delete operator, pointer to object, pointer to class members.

Unit – 3
Constructors and destructors-Purpose of constructors and destructors, default constructors, constructors with and without parameters, Constructor overloading, copy constructor, deep and shallow copy. Invoking constructor and destructor, dynamic constructors, constructors and destructors with static members.

Unit – 4
Overloading Concepts-Function Overloading, Unary and binary operator overloading, overloading new and delete operators, overloading special operators.

Unit – 5
Inheritance-Basic concepts, Reusability and Extensibility, Types of Inheritance, private, public and protected Inheritance. Virtual base class, Virtual destructor. Overriding member functions, Polymorphism-Method polymorphism, polymorphism by parameter, parametric polymorphism, early and late binding.

List of Practical’s:-

1. Write a C++ program to show use of scope resolution operator.
2. Write a C++ program to implement static data member and static member function.
3. Write a C++ program to implement constructors.
4. Write a C++ program to implement operator overloading.
5. Write a C++ program to implement function overloading.
6. Write a C++ program to show dynamic Memory allocation.
7. Write a C++ program to implement all types of inheritance.
8. Write a C++ program to implement early and late binding.
9. Write a C++ program to implement pointer to class members.
10. Write a C++ program to implement virtual base class.
UNIT-I
Motivation for internetworking, the TCP/IP internet, internet service, internet protocol and standardization, Ethernet, FDDI, LAN, WAN, ATM, application and network level interconnection, properties of internet, internet architecture, inter connection through IP routers, Internet addresses.

UNIT-II
ARP, RARP, internet protocol: connectionless datagram delivery, routing IP datagrams, subnet and supernet address extensions.

UNIT-III
The TCP/IP internet layering model, the protocol layering principle, boundaries in the TCP/IP model, UDP: the user datagram protocol, format of UDP message, UDP pseudo-header, UDP encapsulation and protocol layering, laying and the UDP checksum computation, UDP multiplexing, demultiplexing, and ports, reliable stream transport service: properties of the reliable delivery service, transmission control protocol, response to congestion, establishing and closing TCP connection, Routing: Cores, peers and algorithms, an exterior gateway protocol.

UNIT-IV
The domain name system, applications, Telnet, FTP, SMTP, POP3, IMAP-4, MIME, SNMP, internet security and firewall design.

UNIT-V
Good web design, the process of web publishing, document overview, header elements, heading, image, forms, tables, website hosting, HTTP & URL, search engines, Javascript, ASP, servlets.

BOOKS
4. K. Kalata “Internet Programming Thomson learning”.
5. E. Stephen Mack & Janan Platt “HTML 4.0”, BPB Pub
B. A. Computer (IV Semester)

Subject – Economics

(International Economics and Public Finance)

Unit I –

Unit II-

Unit III-
Meaning and Importance of International Economics, Intra and International Trade, Importance of International Trade in Economic Development, Theories of International Trade, Absolute and Comparative Advantage.

Unit IV –

Unit V –
Exchange Rate. Theories of Exchange Rate, Mint Parity Theory, Purchasing Power Parity Theory. Concept of Appreciation and Depreciation of Currency and its effects on Foreign Trade. Trends and Direction of India’s Foreign trade.

Recommended Books:

UNIT –I •
Salient Features of British Constitution: Executive, Legislature, Judiciary and Political Parties.

UNIT –II •

UNIT –III •

UNIT –IV •

UNIT –V •
Comparative Study of the Constitutions of Britain, USA, Switzerland and China: Federal System of USA & Switzerland, Constitutional Amendments in USA and Switzerland, Second Chamber-House of Lords and Senate, Party System in the USA, UK and China.

Recommended Books:

3. C.B. Gena, Comparative Politics, Publisher Jaipur, Rajasthan.
4. B.L. Fadia, Comparative Politics, Sahitya Bhavan Publisher, Agra.
OBJECTIVE: This subject covers combinational and sequential logic circuits. Topics include number systems, Boolean algebra, logic families, and other related topics. Upon completion, students should be able to construct, analyze, verify and troubleshoot digital circuits using appropriate techniques.

UNIT 1
Number systems and Arithmetic Different number systems and their inter conversions. Binary arithmetic: Binary addition, subtraction, multiplication and division. Hexadecimal arithmetic: Addition, subtraction, multiplication and division. Binary subtraction using 1’s complement, 2’s complement method, overflow, underflow, codes, fixed point representation, floating point representation.

UNIT 2
Boolean algebra and logic gates postulates of Boolean algebra theorems of Boolean algebra: Complementation, commutative, AND, or, Associative, Distributive, Absorption laws, De Morgan’s theorems, reducing Boolean expressions, Logic gates: AND, OR, NOT, Ex-OR, EX-NOR, NAND and NOR as universal gates.

UNIT 3
Minimization techniques Introduction to SOP and POS minters, midterms, K-map, Kmap for 2, 3, 4, variables, don’t care condition.,

UNIT 4
Combinational Circuits Half Adder and full Adder Binary Parallel Adder Half Subtract or, full sub-tractor, multiplexer and de-multiplexer

UNIT 5

Text Book

References

List of practical:
1. Study of AND ,OR NOT Gates.
2. Study of NAND ,NOR ,XNOR Gates
3. To verify the truth table of XOR and XNOR Gates
4. To Verify operation of NAND and NOR gates as Universal Gates.
5. To study Half Adder Circuit.
BA(Computer Application) IVth Sem
HTML and Web Designing

Unit 1

Unit 2
**Cascading Style Sheet**- Introduction, Level s of CSS inline style sheet, External style sheet, classes, class and ID method, DIV and SPAN tags.

Unit 3
**JavaScript**- Introduction, Language Basics-Variables, operators, statements, functions, JavaScript Events, Such as onclick, mouse out, mouseover etc, form validation.

Unit 4
**XML**-Introduction, XML Fundamentals, XML Syntax, Accessing Data from XML Documents.

Unit 5
Dynamic web designing(Dream viewer):- HTML basics, website and pages, text formatting, tables, images, links, the basic dream viewer environment, creating a site profile, the importance of site profile, organizing files and folders, folder and file naming rules, creating folder and webpage file, implementation/coding process.

**Book:**
1. HTML AND CSS: DESIGN AND BUILD WEBSITES, BY JON DUCKETT
B. A. Computer (V Semester)

Subject – Economics

(Development and Environment Economics)

UNIT I –

UNIT II –

UNIT III –

UNIT IV –

UNIT V –
Environment- economy linkage; Environment as a necessity and luxury; Population environment linkage; Environment use and environmental disruption as an allocation problem; Market failure for environmental goods; The commons problem; Property right approach to Environmental problem; Valuation of environmental damages; Land water, air and forest. Prevention control and abatement of pollution; Choice of policy instruments in developing countries; Environment Legislation; Indicators of sustainable development.

Recommended Books:

- Indian economics (A development oriented study) Dutt, R and Sundharm, K.P.M. (S. Chand and Company LTD).
- आर्थिक विकास और स्वातंत्र्य – आमतौर स्नेन (रामप्रसाद एण्ड स स पुस्तक प्रकाशन)
- भारतीय अर्थवृत्ति – मिश्रा एवं पुरी (रामप्रसाद एण्ड स स पुस्तक प्रकाशन)
- भारत में आर्थिक पर्यावरण – आ. पी. शर्मा (रामप्रसाद एण्ड स स पुस्तक प्रकाशन)
- अर्थवृत्ति – डा. बी.सी. सहाय (साहित्य मन ब्लॉक, आगरा)
- भारतीय अर्थव्यवस्था – डा. धर्मजन मामोरिया (साहित्य मन ब्लॉक, आगरा)
- भारतीय अर्थवृत्ति – एस.के. मिश्रा एवं श्रीक. पुरी (हिमालय प्लेब्रिंग हाउस)
- भारतीय अर्थव्यवस्था – रूढ़ दलत एवं के.पी.एम.सु.नाराम
- विकास एवं पर्यावरण का अर्थव्यवस्था – डा. आर.पी. गुप्ता, डा. गणेश काविहियाँ, डा.सारा अतरेय (न.प. हिन्दी ग्रन्थ अकादमी, भोपाल)
B. A. Computer  (V Semester)

Subject – Political Science

(India and International Politics)

Unit-I –
International Politics Post 1945: Non alignment, Cold War. Détente and New Cold War.

Unit-II –
Nuclear Armament and Disarmament: NPT, CTBT, START and PNE.

Unit-III –
Indian Foreign Policy: Principles & Determinants. India and International Organizations; India and Regional Groupings.

Unit-IV –
India’s Relations with : USA Russia, China and Pakistan.

Unit-V –

Recommended Books:
1. W.D. Coplin Introduction to International Relations.
2. R. Deutch: The Analysis of International Relations.
3. Brown: International Relations Theory
4. J. Frankel: The Making of Foreign Policy. 10
5. S.H. Hoffman (ed), Contemporary Theory in International Relations.
7. N.K. Jha, Domestic Imperatives in India’s Foreign Policy New Delhi South Asia Pub House 2001.
9. K.P Mishra, India’s Policy of Recognition of States and Government.
10. P. Allan and K. Oldman (eds.) The End of the Cold War, Dordrecht Martinus Nijhoff 1992
13. S.P. Verma, Contemporary Theory in International Relations, New Delhi, Vikas 1988
Objective: Identify the primary hardware components of a personal computer and describe the methods by which personal computers connect. Identify the many types of data storage devices used in personal computer technology, both for primary and secondary storage purposes, and describe common problems that cause personal computers to malfunction or to function below optimum performance levels and determine the repair solutions that will allow the restoration of proper operating conditions and maintenance techniques that will maintain those conditions.

Unit-1
Computer Assembling and Installation
Information on PC & how it works, Architecture of the System, BPC Assembling, trouble shooting and managing Systems, Installations of operating systems & configuring PC network, Installation of service packs, applications such as MS Office, MS Outlook, Anti-virus software, Seagull CBT's etc., Trouble shooting of Windows XP & MS Office.

Unit-2
Mother Board & Components
Types, Form factor, Different Components of Mother Boards (I/O slots, I/O connectors, CMOS battery, RTC, Memory Socket, BIOS, Front Panel Connectors), Types of Buses, compatibility with the processor, SATA interface

Unit-3
System Resources
IRQ, DMA, Memory Address, I/O address, Resource Conflict, Plug & Play Concept.
CMOS Utility
Concept, CMOS RAM, CMOS Battery, backup, CMOS Utility Program menu, clearing CMOS.

Unit-4
Add on Cards, Cables & Connectors
Different latest Add on Cards – (Identification in terms of I/O slot and connectors) (AGP, PCI Express, TV Tuner Card, DVR card, Video Capture, SCSI. USB, NIC, Fire wire, Internal Modem, Sound Card).
Display Systems
Types of VDU, (CRT, LCD, TFT), Terms like Resolution, Dot Pitch, Interlaced &Non Interlaced Power Consumption, Durability, Specification, Installation

Unit-5
Advanced Topic: Administering Users and Groups, Administering Printers, Monitoring Performance and System Events, Optical Disk Drive (ROM, R/W, DVDROM, DVD R/W), Backup Drive (Pen Drive U3 format, Zip Drive, Tape Drive, USB External Drive -HDD, CD/DVD writer), Introduction of Magneto-Optical Drive

List of Practicals:
1. Installation of Windows XP.
2. Configuring Hardware Profile.
3. Creating Users and Groups and setting their properties
4. Installation of Network Interface Card (NIC).
5. Draw layout & understand sections of Motherboards & Add on Cards.
6. Configuring important parameters of CMOS Setup utility, BIOS update.
7. Identify different types of Drives & understand internal mechanism of the same
8. (FDD, HDD, CDO, Zip, Pen, SCSI Drive).
9. Installation of SCSI Drive, Optical Drives (CDR, DVRW).
10. Installation of OS Single, Partitioning, Formatting.
11. Installation of OS Dual.
12. Surveillance using DVR Card, Camera and Accessories – DEMO.

**Prescribed Books:**

<table>
<thead>
<tr>
<th>Sr.</th>
<th>Author</th>
<th>Title</th>
<th>Publisher</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>V.R. Mehta</td>
<td>Principal of Electronics</td>
<td>S.Chand&amp; Co</td>
</tr>
<tr>
<td>2</td>
<td>Malvino &amp; Leach</td>
<td>Digital Principals &amp; Applications</td>
<td>--</td>
</tr>
<tr>
<td>3</td>
<td>Bigelow</td>
<td>Bigelow’s Troubleshooting Maintaining &amp; Repairing PC’s</td>
<td>Tata McGraw Hill</td>
</tr>
<tr>
<td>4</td>
<td>Mark Minasi</td>
<td>The Complete PC Upgrade &amp; Maintenance Guide</td>
<td>BPB Publication</td>
</tr>
<tr>
<td>5</td>
<td>SD. Balasubramaniam</td>
<td>Computer Installation &amp; Servicing</td>
<td>Pearson Education</td>
</tr>
</tbody>
</table>
OBJECTIVE: This course will provide you with an understanding of the design, creation, maintenance and management of a relational database management system (RDBMS). You will learn how to create and access data using Structured Query Language (SQL), the programming language used by most large relational database management systems such as Oracle.

UNIT 1
DBMS INTRODUCTION: Purpose and advantages of DBMS, view of data, DBMS architecture and data independence, database languages. Classification of DBMS, schema and sub schema. database administrator and users, data dictionary, data modeling using ER model. Entities, attributes and relationships.

UNIT 2
KEYS: Domains, relations, kinds of relations, various types of keys, candidate, primary, alternate and foreign keys. Codd’s rule
Relational algebra: relational algebra with extended operations, tuple relational calculus, domain relational calculus, set operation, aggregate functions, null values, join relations.

UNIT 3
RELATIONAL DATABASE DESIGN: pitfalls in relational database design trivial and non trivial dependencies, closure set of dependencies and of attributes. Introduction to normalization, non loss decomposition, FD diagram, 1st, 2nd, 3rd BCNF, 4NF, 5NF

UNIT 4
Basic SQL: DDL, DML and DCL commands, specifying constraints in SQL, select statement.

UNIT 5
Additional features of SQL, PL/SQL, cursor, trigger, view

List of Practical’s in PL/SQL
1. program to perform all arithmetic operations.
2. program to find simple interest.
3. program to find area of square rectangle and circle.
4. program to print your name n times.
5. program to find whether an entered number is even or odd.
6. program to find whether an entered number is positive, negative or zero.
7. program to find whether an entered number is divisible by 11 or not.
8. program to print table of entered number.
9. program to print factorial of entered number.
10. program to find greatest of three numbers.
Unit-1
Introduction to Data structures and DMA:- Definition, Classification of data structures: primitive and non-primitive. Operations on data structures. Meaning of static and dynamic memory allocation. Memory allocation functions: malloc, calloc, free and realloc. Recursion

Unit-2
Stack – Definition, Array representation of stack, Operations on stack: Infix, prefix and postfix notations Conversion of an arithmetic expression from Infix to postfix. Applications of stacks.
Queue - Definition, Array representation of queue, Types of queue: Simple queue, circular queue, double ended queue (deque) priority queue, operations on all types of Queues

Unit-3
Linked list – Definition, Components of linked list, Representation of linked list, Advantages and Disadvantages of linked list. Types of linked list: Singly linked list, Doubly linked list, Circular linked list and circular doubly linked list. Operations on singly linked list: creation, insertion, deletion, search and display.

Unit-4

Unit-5
Searching and Sorting Search - Basic Search Techniques: Search algorithm searching techniques: sequential search, Binary search – Iterative and Recursive methods. Comparison between sequential and binary search.
Sort- General Background: Definition, different types: Bubble sort, Selection sort, Merge sort, Insertion sort, Quick sort

Advanced topics in Data Structure-Graphs, Hashing.

TEXT BOOKS:

REFERENCE BOOKS:
Unit I –


Unit II –

Measures of Central Tendencies -Mean, Median, Mode, Geometric Mean and Harmonic Mean, Measures of Dispersion: Range, Mean Deviation, Standard Deviation, Co-efficient of Variation, Quartile Deviation.

Unit III –

Correlation: Karl Pearson’s Co-efficient of Correlation, and Spearman’s Rank Correlation., Regression: Regression analysis, Co-efficient of Regression. Use and Application of Regression.

Unit IV –

Association of Attributes. Time Series analysis. Concept and components Additive and Multiplicative models, Methods of Moving Averages. Index Number. Concept, Laspeyer’s, Paasche’s and Fisher’s Index Numbers, Problems in the construction of Index numbers and their limitations.

Unit V –


Recommended Books:

- Elementary Mathematics in Economics . Dr. Mehta and Madnani
- Elements of Statistics . Dr. Mohan Singhal
- Statistical Analysis . Dr. Shukla and Sahai
Unit-I –

Unit-II –

Unit-III –
Personnel Administration : Recruitment, Training and Promotion, UPSC. Settlement of Disputes, O and M.

Unit-IV –

Unit-V –
Development Administration ; Role of Bureaucracy. Role of Panchayati Raj Institutions. Corruption; Lokpal & Lokayukt; Good Governance.

Recommended Books:
4. S.R. Maheshwari, Administrative Theory, New Delhi; Allied, 1994
6. T.N. Chaturvedi (ed) Contemporary Administration : Culture of India, New Delhi, Mittal 1997
OBJECTIVE: By this course students will be able to understand the basic functionality of multimedia like images, sound animation and video.

Unit-I
Introduction to multimedia, multimedia system, components and applications, Text, types of text, font and faces, using text in mm font designing and editing tools, hypermedia and hypertext, Ways to present text, aspects of test design, character, character set. Images, still images, bitmap, vector drawing, natural light and colors, color palettes, color models, image file formats, jpeg, bitmap, tiff, dib, eps, cif, pic, tga, aspect ratio, white balance, attributes of images, resolution, pixel depth. Photoshop: Photoshop’s environment, raster and vector graphics, navigating in Photoshop, image size and resolution, cropping, selecting image areas, the rectangular and elliptical marquee tool, the lasso tools, saving selection, the magnetic lasso tools, modifying selections. Layers, floating versus fixed selections, undoing Previous steps, copying selections, creating layers, transforming layers, copying layers between images, arranging layers, saving images in Photoshop format. Color modes, color and painting. Images modes - Mode characteristics, grayscale and bitmap modes. Selecting colors, painting tools, the clone stamp tool, text, layer effects, Brightness contrast, levels adjustments layers, Hue/saturation.

Unit-II

Unit-III
Animation:- Principle of animation, animation techniques, animation development process, types of animation 2D and 3D animation, Animation technique:- 2D and 3D animation techniques, Animation file formats - .dir, .der, .fli, .max, .pics, .gif, .swf. Flash:- Workspace of flash, creating timeline, main editing tools, saving and uploading files, utilities, grouping, arranging, keyframes, frame rate, frame by frame animation, onion skins, motion tween, shape tween.

Unit-IV
Video:- How video works, Broadcast video standards:- NTSC, PAL, SECAM, ATSC, DTV, HDTV, IPTV, Analog and Digital video, Digital video standards:- ATSC, DVB, ISDB, video recording and shooting videos, video editing. Video file formats, MPEG, 3GP, AVI, Quick time, real video VHS, camera. Adobe premiere:- Workspace of adobe premiere, Creating timeline:-importing, capturing video files, basic tools of editing and shortcut commands, applying various effects, cut, fade, mix and wipe, getting output.

Unit-V
Multimedia authoring tools:- Introduction, factors for selecting of an authoring tools, director, hyper card, Aimtech, Link way etc. Types of authoring tools, stages in designing and producing, multimedia, products, planning and distribution of multimedia project.

Text Book

List of practical:
1. Resizing, cropping and selecting a image using Photoshop.
2. Working with layers of images in the Photoshop.
3. Liquefying, Auto leveling, auto color, auto contrast and brightness of the image in Photoshop.
5. Understanding different sound channels.
6. Mixing different sound samples using sampling of sound in Sound Forge.
7. Creating a Simple Flash animation using different tools in Macromedia Flash.
8. Simple Video Editing Using Adobe Premier.
Unit-1
Introduction to Web Applications, Basic Web Technologies (HTML, XHTML)

Unit-2
Introduction to PHP, WAMP installation and Configuration, PHP Variables, Functions, Control Structures, Conditional Statements, Working with files, uploads, image and basic PHP programming concepts, Embedding PHP in HTML.

Unit-3
PHP Functions: user defined functions, Strings Concatenation, Strings functions.
Arrays: Creating Array and Accessing Array Elements, Control statements, Loops, form validation.

Unit-4
Math, Time, Date, Database Functions, PHP Debugging techniques, Processing Web Forms, Web Security

Unit-5
Database Practices-, DB Handling, Database Interfaces and Integration – Handling MYSQL Database with PHP Function
Working with forms: - CRUD – Select statements, Creating Database/Tables, Inserting values, Updating and Deleting, PHP with MYSQL, Creating Connections, Selecting Database, Perform Database (Query).

Text Books:

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Name of Book</th>
<th>Edition</th>
<th>Authors’ Name</th>
<th>Publication</th>
</tr>
</thead>
</table>

Reference Books:

<table>
<thead>
<tr>
<th>S.No</th>
<th>Name of Book</th>
<th>Edition</th>
<th>Authors’ Name</th>
<th>Publication</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Beginning PHP5, Apache, and MySQL Web Development</td>
<td>2005</td>
<td>Elizabeth Naramore, Jason Gerner, Yann Le Scouarnec, Jeremy Stolz, Michael K. Glass</td>
<td>Wrox Publication</td>
</tr>
<tr>
<td>2</td>
<td>Beginning HTML, XHTML, CSS, and JavaScript</td>
<td>2010</td>
<td>Jon Duckett</td>
<td>Wiley Publishing, 2010</td>
</tr>
</tbody>
</table>

List of practical:

<table>
<thead>
<tr>
<th>S.No</th>
<th>Name of practical</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Create a web page by making use of the following tags: Head, Body, Bgcolor, text and submit.</td>
</tr>
<tr>
<td>2</td>
<td>Write a html program applying inline css.</td>
</tr>
<tr>
<td>3</td>
<td>write a html program using class based external style sheet</td>
</tr>
</tbody>
</table>
Write a java script program to design the simple Calculator
Write a java script program to find the factorial of given number
Write a javascript program to form validation in html.
Create a web form using php for login page.
Create a simple xml document with following details: Rollno, Sname, Contact, Email and Address.
Write a simple php script to perform crud operations.
Create a web form using php for enquiry details.
Unit – 1
Introduction-What is operating system? System calls, types of system calls, Operating system architecture, Operating System service. Simple batch systems, multiprogrammed batches Systems, Time sharing systems, Personal computer systems, Parallel systems, distributed Systems, Real time Systems, multitasking, RTOS, Client-server system, peer-to-peer systems

Unit – 2
Process-Process concept, Process Scheduling, operation on processes, PCB, Interprocess Communication.

Thread-Concept of thread, multithreading, context switching, Scheduling criteria, types of Scheduling, long term, short term and medium term scheduling, scheduling algorithms. Multiple processor scheduling.

Unit – 3
Deadlock-Definition, deadlock characterization, handling of deadlock, deadlock prevention, avoidance, detection and recovery.

Unit – 4

Unit – 5
Secondary storage Structure-Disk structure, disk Scheduling, disk management, swap space management, disk reliability.


Advance Topics: Network Operating System

Text Books

Reference Books: