

Syllabus Unitization & Prescribed Books (Session 2023-2024)

Department of CS & IT

Class – BCA-IV Semester

Pattern of Question Paper - Eight questions of equal marks (Specified in the syllabus), two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

SYSTEM SOFTWARE

M. Marks: 75

Month wise Division	Syllabus Unitization
Jan-Feb	<u>SECTION–A</u> Introduction to System Software Introduction to System Software and its components Translators, loaders, interpreters, compiler, assemblers <u>SECTION–B</u> Assemblers: Overview of assembly process, design of one pass and two assemblers Macroprocessors: Macro definition and expansion, conditional macro expansion, Recursive macro expansion
March	<u>SECTION–C</u> Compilers: Phases of Compilation Process, Lexical Analysis, Parsing, Storage Management Optimization Incremental Compilers, Cross Compilers.
April	<u>SECTION–D</u> Loaders and Linkage Editors: Basic loader functions. Relocation, program linking, linkage, editors, dynamic linking, Bootstrap loaders

Prescribed Book

Book Name – System Software

Author – Charanjit Singh

Publisher – Kalyani Publishers

Internet Applications

M. Marks: 75

Month wise Division	Syllabus Unitization
Jan-Feb	<p>SECTION–A Introduction: About internet and its working, business use of internet, services offered by internet, Evolution of internet, internet service provider (ISP), windows environment for dial up networking (connecting to internet), internet addressing (DNS) and IP addresses).</p> <p>E–Mail Basic Introduction: Advantage and disadvantage, structure of an e–mail message, working of e–mail (sending and receiving messages), managing e–mail (creating new folder, deleting messages, forwarding messages, filtering messages).</p> <p>SECTION–B Internet Protocol: Introduction, file transfer protocol (FTP), Gopher, Telnet, other protocols like HTTP and TCPIP.</p>
March	<p>SECTION–B WWW: Introduction, working of WWW, Web browsing (opening, viewing, saving and printing a web page and bookmark), web designing using HTML, DHTML with programming techniques.</p> <p>SECTION–C Search Engine: About search engine, component of search engine, working of search engine, difference between search engine and web directory</p>
April	<p>SECTION–D Intranet and Extranet: Introduction, application of intranet, business value of intranet, working of intranet, role of extranet, working of extranet, difference between intranet and extranet.</p>

Prescribed Book

Book Name – Internet Applications

Author – Anshuman Sharma

Publisher – Khanna

DATA STRUCTURES AND FILE PROCESSING

M. Marks: 75

Month wise Division	Syllabus Unitization
Jan-Feb	<u>SECTION-A</u> Basic Data Structures: Introduction to elementary Data Organization and operations, complexity of Algorithms and Time space trade off, Arrays, Stacks, Linked Lists, Linear Search, Binary Search, Bubble sort
March	<u>SECTION-A</u> Queues <u>SECTION-B</u> Trees Binary Trees & Binary Search Trees. Graphs and Algorithms to manipulate them. <u>SECTION-C</u> Sorting Techniques: Selection Sort, Insertion Sort, Quick Sort, Merge Sort, Heap Sort.
April	<u>SECTION-D</u> File Organization: Concept of field, record, file, blocking and compaction. File Organization Techniques: Sequential, indexed, indexed sequential, Direct, Hashing. Concept of master and transaction files.

Prescribed Book

Book Name – Data Structures

Author – Seymour Lipschutz

Publisher – McGraw Hill

INFORMATION SYSTEMS

M. Marks: 75

Month wise Division	Syllabus Unitization
Jan-Feb	<p style="text-align: center;">SECTION–A</p> <p>Fundamental aspects of Information, Capturing of Information, Converting Information to Computer – readable form, source of Information, on–line Information access and capture.</p> <p style="text-align: center;">SECTION–B</p> <p>What are systems? Information Systems? Categories of Information Systems, Development Life Cycle of Information system.</p>
March	<p style="text-align: center;">SECTION–C</p> <p>Various types of information systems: Transaction processing systems, office Automation systems, MIS and decision support system.</p>
April	<p style="text-align: center;">SECTION–D</p> <p>Case studies of the Information System: Accounting Information systems, Inventory control systems & Marketing systems.</p>

Prescribed Book

Book Name – Information system

Author – Rachhpal singh

Publisher – kalyani