

**Gondwana University,
Gadchiroli**

**Syllabus
Of**

**Bridge Course
For
(MCA)**

(Two Years Post Graduate Course)

2020-2021

Master of Computer Application
Bridge Course
Marks :- 80

UNIT-I: Language Evolution

Machine Language, Assembly Language, High Level Language. **Translators:** Compiler, Interpreter and Assembler, Linker, Loader, Study of Programming Language (Procedure Oriented, Object-Base, Event-Base),

Programming Construction Tools

Problem Analysis, Process Analysis, Conceptual Development of Solution. Development Tools: **Algorithm:** Types of Algorithm, Algorithm of Analysis, Advantage and Disadvantage of Algorithm **Flowcharts:** Concept, Symbols, Rules of flowcharting, Advantage and Disadvantage of Flowchart.

UNIT –II: Introduction to Operating System

Operating System: Introduction, Purpose, Function and Role of Operating System.

Types of OS: Concepts of Batch, Multi Programmed, Time Sharing, Parallel, Real Time and Distributed.

Operating System Structure

System Components: Process , Main Memory, File I/O System, Secondary Storage Management, Networking, Protection System, Command Interpreter System, Operating System Services, System Call.

Process and Job Control: Process and Types of Process, Process State

UNIT-III: Computer Programming Concepts

Basics of Programming Language: Use of Character Set, Meaning of Keywords and Identifiers, Role of Data Types, Constants and Variables. Importance of Casting, Different Types of Operators and their Precedence, Expressions, Conditional Statements (One-Way, Two-Way and Multi-Way Conditional), Looping Statements (for, while, do-while), Usage of break, continue, goto and exit Statement.

UNIT-IV: Basic DBMS Concepts

Introduction: - Overview of database management system, limitations of data processing Environment, database approach, data independence, three level of abstraction, DBMS structure. DBMS Model, DBMS Vs RDBMS

Entity Relation Model: Entity, attributes, keys, relations, cardinality, participation, weak entities, ER diagram,

BOOKS

- 1) Pradeep K. Sinha and Priti Sinha “ Computer Fundamentals”, BPB, 2007, ISBN-10:81-7656-752-3/13:978-81-7656-752-7
- 2) Chetan Shrivastava “ Fundamentals of Information Technology”, Kalyani publishers, 2002, ISBN-81-7663-576-6
- 3) Dr Madhulika Jain, “Information Technology Concept”, BPB, 2006, ISBN -81-7656-276-9
- 4) E. Balguruswami, “Programming in ANSI C”, TMH, 2009, ISBN-978-0-07-064822-7/0-07-064822-0
- 5) S.B Kishor, ” Information Technology”, Das Ganu Prakashan, ISBN 979-81-921757-9-9