**Directorate of Distance Education**

**Integral University, Lucknow**

**Subject Name: INFORMATION TECHNOLOGY WITH INTRODUCTION TO DBMS**

**Subject Code: MAE 105 Paper Code: ITI-DBMS/M**

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| **C****O****N****T****E****N****T****S** | **S. No.** | **Chapter Name** |
| **UNIT 1** | **BUSINESS PROCESSES AND INFORMATION SYSTEMS FOUNDATIONS** |
| **UNIT 2** | **DOCUMENTING BUSINESS PROCESSES AND INFORMATION SYSTEMS** |
| **UNIT 3** | **DATABASE MANAGEMENT SYSTEMS** |
| **UNIT 4** | **E-BUSINESS** |
| **UNIT 5** | **BUSINESS INTELLIGENCE AND KNOWLEDGE MANAGEMENT SYSTEMS** |
| **UNIT 6** | **SYSTEMS ANALYSIS** |
| **UNIT 7** | **SYSTEMS DESIGN AND IMPLEMENTATION** |
| **UNIT 8** | **IT GOVERNANCE** |
| **UNIT 9** | **CONTROLLING INFORMATION SYSTEMS** |
| **UNIT 10** | **CORE BUSINESS PROCESSES** |
| **UNIT 11** | **THE “ORDER-TO-CASH” PROCESS** |
| **UNIT 12** | **THE “PURCHASE-TO-PAY” (PTOP) PROCESS** |
| **UNIT 13** | **THE BUSINESS REPORTING (BR) PROCESS** |

**UNIT-1 BUSINESS PROCESSES AND INFORMATION SYSTEMS FOUNDATIONS**

* Introduction to Information Systems
* Challenges and Opportunities for the Business Professional
* Business Operations
* What Is an Information System?
* The Information System
* Logical Components of a Business Process
* Management Uses of Information
* The Role of the Business Professional
* Review Question
* Further readings

**UNIT-2 DOCUMENTING BUSINESS PROCESSES AND INFORMATION SYSTEMS**

* Introduction
* Reading Systems Documentation
* Reading Systems Flowcharts
* Reading Entity-Relationship Diagrams
* Preparing Data Flow Diagrams
* Preparing Systems Flowcharts
* Review Question
* Further Readings

**UNIT-3 DATABASE MANAGEMENT SYSTEMS**

* Introduction
* Event Data Processing
* Transaction Processing Approach
* Managing Data Files
* Database Management Systems
* Overcoming the Limitations of File Processing
* Enabling Event-Driven Systems
* Entity-Relationship (E-R) Modelling
* Entities and Attributes
* E-R Model Development
* Mapping an E-R Diagram to a Relational DBMS
* Review questions
* Further Readings

**UNIT-4 E-BUSINESS**

* Introduction
* The Changing World of Business Processing
* Automating Manual Systems
* Online Transaction Entry (OLTE)
* Online Real-Time (OLRT) Processing
* Online Transaction Processing (OLTP)
* Advances in Electronic Processing and Communication
* Digital Image Processing
* Communication Networks
* Stages of E-Business
* Electronic Document Management
* Electronic Data Interchange
* Internet Commerce
* Review Questions
* Further Readings

**UNIT-5 BUSINESS INTELLIGENCE AND KNOWLEDGE MANAGEMENT SYSTEMS**

* Introduction
* Management Decision Making
* Systems For Aiding Decision Makers
* Business Intelligence Systems, OLAP, and Group Support Systems
* Knowledge Management
* Gathering Knowledge with Groupware
* Storing Knowledge in Data Warehouses
* Intelligent Agents for Knowledge Retrieval
* Creating A Knowledge Culture
* Conclusions
* Review Questions
* Further Readings

**UNIT-6 SYSTEMS ANALYSIS**

* Introduction
* Definition and Objectives of Systems Development
* Controlling the Systems Development Process
* Project Management
* Quality Assurance
* Involvement in Systems Development
* Business Process Reengineering
* Change Management
* Systems Survey
* Triggering Systems Development
* Gather Facts
* Devise the Project Plan
* Obtain Approvals
* Structured Systems Analysis
* Select the Best Alternative Physical System
* Complete and Package the Systems Analysis Documentation
* Conclusions
* Internal Presentation
* Review Questions
* Further Readings

**UNIT-7 SYSTEMS DESIGN AND IMPLEMENTATION**

* Introduction
* Systems Selection
* Software and Hardware Acquisition Alternatives
* Software Acquisition Alternatives
* Hardware Acquisition Alternatives
* The Intermediate Steps in Systems Selection
* Introduction to Structured Systems Design
* Introduction to Systems Implementation
* The Intermediate Steps in Systems Implementation
* Test System
* Obtain Approvals
* Conduct Conversion
* The Post-Implementation Review
* Systems Maintenance
* Review Questions
* Further Readings

**UNIT-8 IT GOVERNANCE**

* Why Do We Need Control?
* Corporate Governance
* Fraud and Its Relationship to Control
* Defining Internal Control
* A Working Definition of Internal Control
* Ethical Considerations and the Control Environment
* Business Process Control Goals and Control Plans
* Control Goals of the Operations Process
* Control Plans
* Introduction to Pervasive Controls
* Planning and Organization Domain
* Acquisition and Implementation
* Delivery and Support
* Monitoring
* Conclusions

**UNIT-9 CONTROLLING INFORMATION SYSTEMS**

* Introduction
* The Control Framework
* The Control Matrix
* Steps in Preparing the Control Matrix
* Control Plans for Data Entry without Master Data
* System Description and Flowchart
* Applying the Control Framework
* Control Plans for Data Entry with Master Data
* System Description and Flowchart
* Applying the Control Framework
* Applying the Control Framework
* Conclusions
* Review Questions
* Further Readings

**UNIT-10 CORE BUSINESS PROCESSES**

* Introduction
* Process Definition and Functions
* Organizational Setting
* Managing the M/S Process: Satisfying Customer Needs
* Decision Making and Kinds of Decisions
* Using Data Mining to Support Marketing
* Mastering Global Markets with E-Business
* Logical Description of the M/S Process
* Logical Data Flow Diagrams
* Physical Description of the M/S Process
* Management Reporting
* Application of the Control Framework
* Control Goals
* Conclusions
* Review Questions
* Further Readings

**UNIT-11 THE “ORDER-TO-CASH” PROCESS**

* Introduction
* Organizational Setting
* Managing the RC Process: Leveraging Cash Resources
* CRM: Customer Self-Service Systems
* Digital Image Processing Systems
* Managing Cash Receipts
* Logical Process Description
* Logical Data Flow Diagrams
* Logical Data Descriptions
* Types of Billing Systems
* Physical Process Description of the Billing Function
* Selected Process Outputs
* Application of the Control Framework for the Billing Function
* Recommended Control Plans
* Physical Process Description of the Cash Receipts Function
* Recommended Control Plans
* Conclusions
* Review Questions
* Further Readings

**UNIT-12 THE “PURCHASE-TO-PAY” (PTOP) PROCESS**

* Introduction
* Process Definition and Functions
* Organizational Setting
* Goal Conflicts and Ambiguities in the Organization
* Logical Process Description
* Logical Data Descriptions
* Technology Trends and Developments
* Physical Process Description
* Process Nature of inputs Updated master data
* Conclusions
* Review Questions
* Further Readings

**UNIT-13 THE BUSINESS REPORTING (BR) PROCESS**

* Process Definition and Functions
* Budgets and Financial Reporting
* Horizontal and Vertical Information Flows
* Logical System Description
* Discussion and Illustration
* The General Ledger Master Data
* Limitations of the General Ledger Approach
* Technology-Enabled Initiatives in Business Reporting
* Enterprise System Financial Module Capability
* Balanced Scorecard
* Business Intelligence
* Business Intelligence Systems for Aiding the Strategic Planner
* Extensible business reporting language (xbrl)
* Conclusions
* Review Questions
* Further Readings