



Management Information Systems(ILOC)

Dr.Dashrath Mane

Management Information Systems

1. Credits

Course Code:	Course Title	Credit
ILO7013	Management Information System	03

Management Information Systems- Objective & Outcome

Course Objectives	
1	To discuss the roles played by information technology in today's business.
2	To understand the Intelligent Techniques for Data Analytics.
3	To determine ethical and privacy issues in management systems.
4	To understand the requirements for various Business Operations
5	To define various technologies on which information systems are built
6	To determine the types of systems used for enterprise-wide knowledge management and the way they provide value for businesses.
Course Outcomes: Learner will be able to understand	
1	The impact of information systems on an organisation's growth.
2	The principal tools and technologies for accessing information from databases to improve business performance and decision making.
3	The ethical frameworks and security concerns in information systems.
4	The various business models used for social computing.
5	IT infrastructure and its components and its current trends
6	Various enterprise-wide knowledge management systems and its functionalities.

Syllabus : Module 1-2

Module	Content	Hours
1	Introduction to Information Systems (IS) Computer Based Information Systems, Impact of IT on organizations, Importance of IS to Society. Organizational Strategy, Competitive Advantages and IS	04
2	Database and Business Intelligence Database Approach, Big Data, Data warehouse and Data Marts, Managing data resources:establishing an information policy, ensuring data quality Business intelligence (BI): Decision Making Process, BI for Data analytics and Presenting Results	08

Syllabus : Module 3-6

3	Ethical and Social Issues in Information Systems Ethical issues and Privacy, Information Security, Threat to IS, and Security Controls	06
4	Social Computing (SC) SC in business-shopping, Marketing, Operational and Analytical CRM, E-business and E-commerce – B2B B2C. Mobile commerce.	07
5	Emerging Technologies The Emerging Mobile Digital Platform: Consumerization of IT and BYOD (Bring Your Own Device), Grid Computing, Virtualization, Cloud Computing, Green Computing, High-Performance and Power-Saving Processors, Autonomic Computing Contemporary Software Platform Trends: Web Services and Service-Oriented Architecture, Software Outsourcing and Cloud Services Management Issues: Dealing with Platform and Infrastructure Change Management and Governance	07
6	Information System within Organization Knowledge management System, Knowledge management value chain, Decision Support System, Transaction Processing Systems, ERP and ERP support of Business Process.	07
	Total	39

Textbooks and References:

Textbooks	
1	Kelly Rainer, Brad Prince, Management Information Systems, Wiley
2	K.C. Laudon and J.P. Laudon, Management Information Systems: Managing the Digital Firm, 13th Ed. © Pearson Education Limited 2014
References	
1	MIS: Management Perspective, D.P. Goyal, Vikas Publishing House Pvt. Ltd, 4 th Edition.
2	D. Boddy, A. Boonstra, Managing Information Systems: Strategy and Organization, Prentice Hall, 2008.

IA & CA

Internal Assessment

Assessment consists of one Mid Term Test of 20 marks and Continuous Assessment of 20 marks. The Mid Term test is to be conducted when approximately 50% syllabus is completed and its duration will be one hour.

Continuous Assessment

Continuous Assessment is of 20 marks. The rubrics for assessment will be considered on approval by the subject teachers. It should be minimum 2 or maximum 4 from the following table.

CA Rubrics :

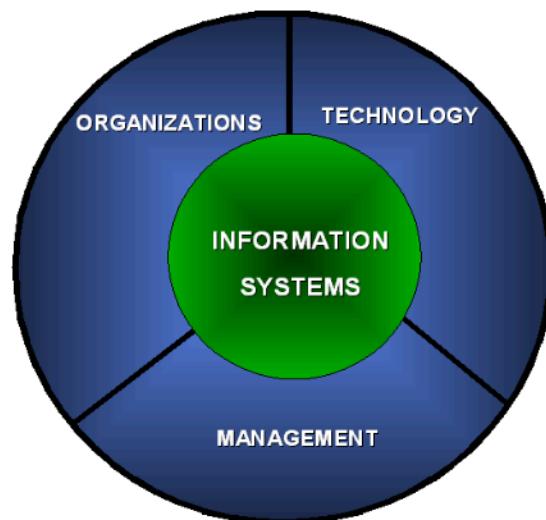
Sr. No	Rubrics	Marks
1	Multiple Choice Questions (Quiz)	10
2	Publication in SCI , IEEE, UGC Care Listed Journal	10
3	Participation in event/ workshop/ talk / competition followed by small report and certificate of participation relevant to the subject	10
4	Wins in the event/competition/hackathon pertaining to the course	10
5	Project based Learning and evaluation / Extra assignment / Question paper solution	10
6	NPTEL/ Coursera/ Udemy/any MOOC Certificate course for 4 weeks or more	10
7	Content beyond syllabus presentation (Special Topic Seminar)	10
8	Creating Proof of Concept i.e to design and develop a suitable Information System	10
9	Peer review and Participation	10

ESE: End Semester Examinations

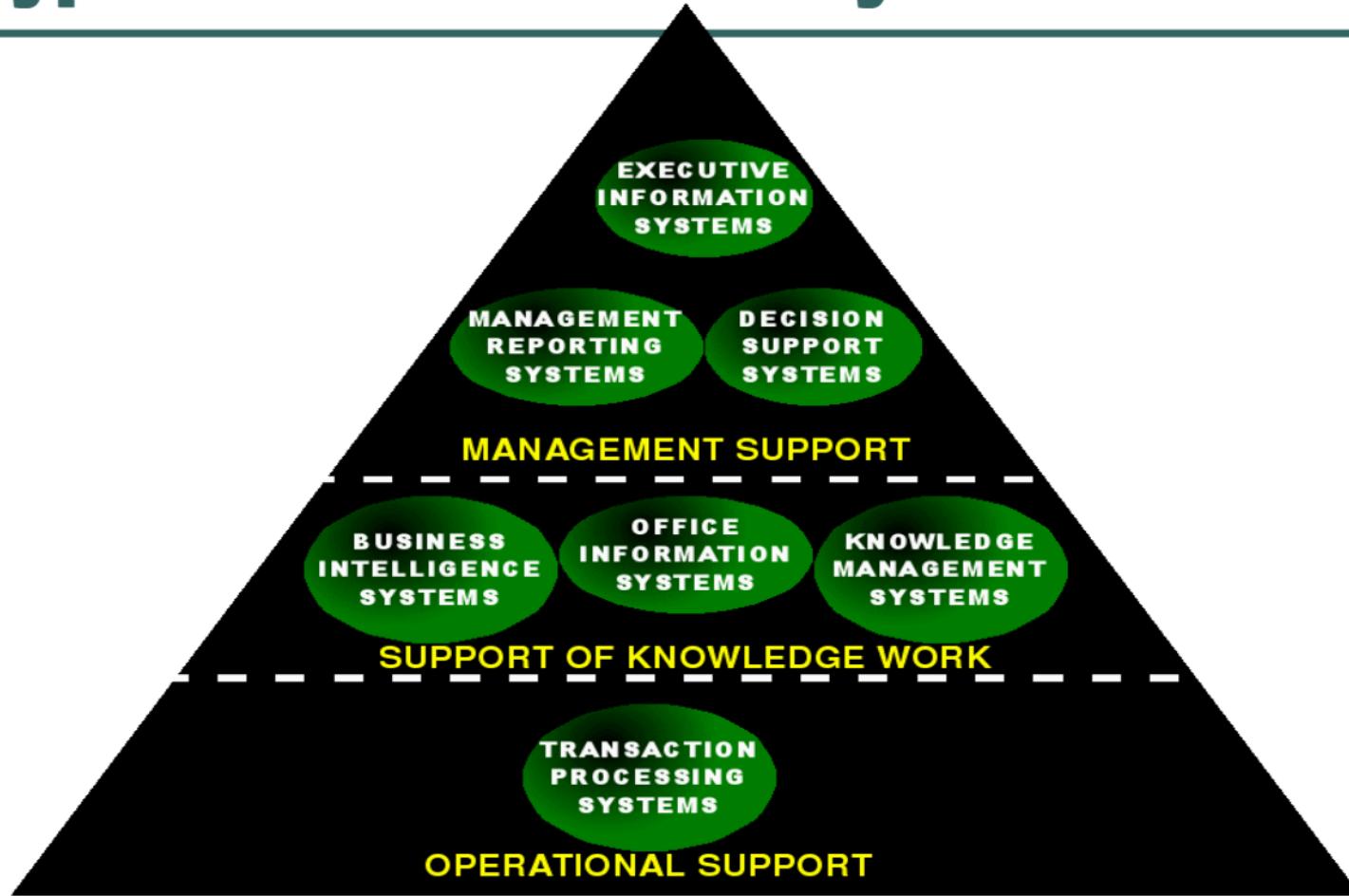
End Semester Theory Examination	
1	Question Paper will comprise a total of six questions
2	All Questions carries equal Marks
3	Questions will be mixed in nature(For Ex.-Suppose question 2 has part (a) from module 3 then part (b) will be from any other module other than module 3)
4	Only Four Questions need to be solved
5	In the question paper, the weightage of each module will be proportional to the number of respective lecture hours as mentioned in the syllabus.

Meaning Of Information Systems

- An information system is an organized combination of people, hardware, software, communications Networks and data resources that collects, transforms, and disseminates information in an organization.



Types Of Information System



MANAGEMENT INFORMATION SYSTEM(MIS)

- A Management Information System (MIS) is a system that uses computer-based tools and software to collect, store, and analyze a company's data to support better decision-making.



Role Of MIS

The role of MIS in an organization can be compared to the role of heart in the body.

- The information is the blood and MIS is the heart. In the body the heart plays the role of supplying pure blood to all the elements of the body including the brain.
- The MIS plays exactly the same role in the organization.
- The system ensures that an appropriate data is collected from the various sources, processed, and sent further to all the needy destinations.

Characteristics of MIS

- **Management-oriented:** The basic objective of MIS is to provide information support to the management in the organization for decision making.
- **Management directed:** When MIS is management-oriented, it should be directed by the management because it is the management who tells their needs and requirements more effectively than anybody else.
- **Integrated:** It means a comprehensive or complete view of all the subsystems in the organization of a company.

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- **Common data flows:** The integration of different subsystems will lead to a common data flow which will further help in avoiding duplication and redundancy in data collection, storage and processing.
 - **Heavy planning-element:** The preparation of MIS is not a one or two day exercise. It usually takes 3 to 5 years and sometimes a much longer period.
 - **Subsystem concept:** When a problem is seen in 2 sub parts, then the better solution to the problem is possible.

Features of MIS



- Timeliness
- Accuracy
- Consistency
- Completeness
- Relevance



Components of MIS

1) Marketing Research System (MRS)

Marketing research can be seen as the systematic and objective search for and analysis of data and information relevant to the identification and solution of any problem in the field of marketing.



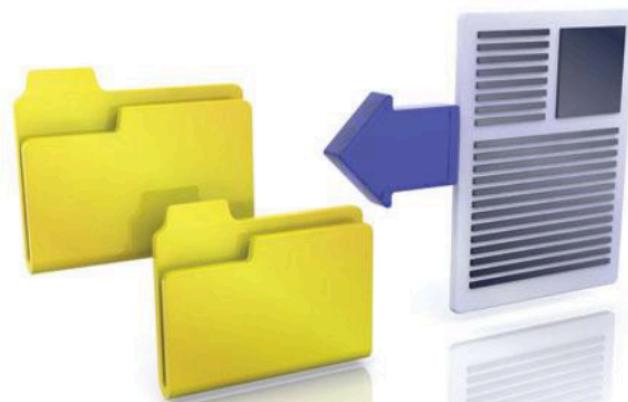
2) Marketing Intelligence System (MIS)

The process of acquiring and analyzing information in order to understand the market (both existing and potential customers); to determine the current and future needs and preferences, attitudes and behavior of the market; and to assess changes in the business environment that may affect the size and nature of the market in the future.



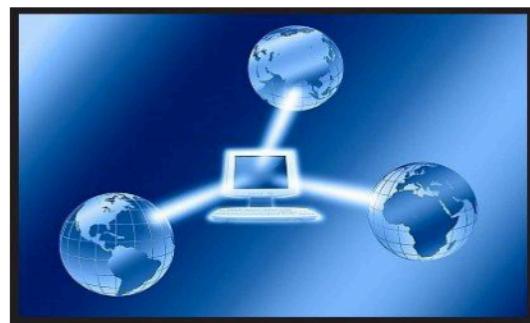
3) Internal Record System (IRS)

Marketing managers rely on internal reports on orders, sales, prices, costs, inventory levels, receivables, payables, and so on. By analyzing this information, they can spot important opportunities and problems.



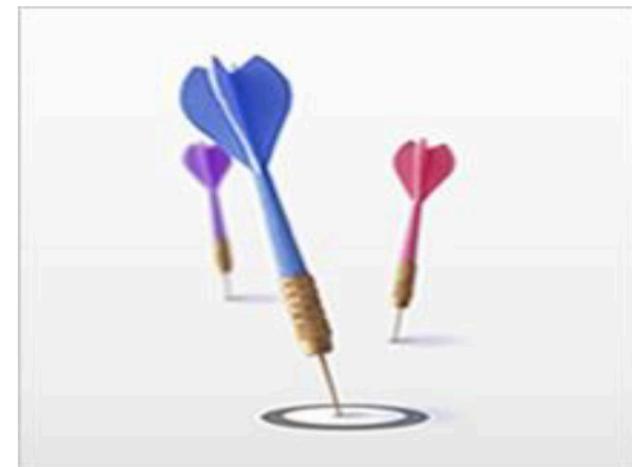
4) Decision Support System(DSS)

A decision support system (DSS) is a computer-based information system that supports business or organizational decision-making activities. DSSs serve the management, operations, and planning levels of an organization and help to make decisions, which may be rapidly changing and not easily specified in advance.



Aim of Management Information System

- The main aim of MIS is to inform management and help them make informed decisions about management and the way the business is run.

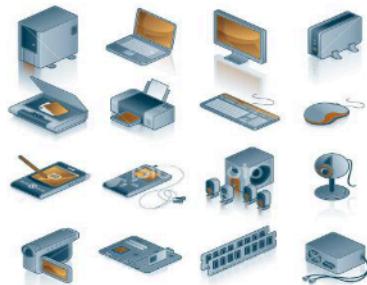


Types Of MIS

- **Transaction processing systems:** These systems process a large volume of routine, recurring transactions.
- **Operations information systems:** These systems gather comprehensive data, organize it and summarize it in a form that is useful for managers.
- **Decision support systems:** These systems help managers with the necessary information to make intelligent decisions.
- **Expert systems:** They are meant to mimic humans in making decisions in a specific field.

Elements of MIS

- 1.Hardware**
- 2.Software**
- 3.Control**
- 4.Databases and application programs**
- 5.People**
- 6.Telecommunications and Networks**



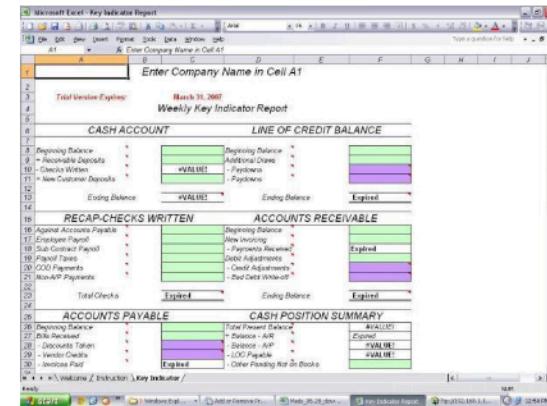
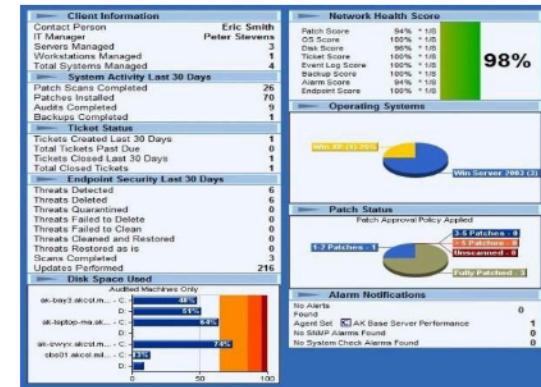
Examples of MIS Applications:

MIS can be used for a wide range of applications, including:

- **Financial reporting:** Generating financial statements, tracking expenses, and analyzing profitability.
- **Sales and marketing analysis:** Tracking sales trends, analyzing customer behavior, and optimizing marketing campaigns.
- **Inventory management:** Monitoring stock levels, forecasting demand, and optimizing inventory turnover.
- **Human resource management:** Tracking employee performance, managing payroll, and analyzing employee demographics.
- **Project management:** Tracking project progress, managing resources, and identifying potential risks.

Outputs Of a MIS

- **Scheduled reports** which are produced periodically, or on a Schedule (daily, weekly, monthly).
 - **Key-indicator report** which summarizes the previous day's critical activities and also it is typically available at the beginning of each day.



Outputs Of a MIS

- **Demand report** which gives certain information at a manager's request.
- **Exception report** which is automatically produced when a situation is unusual or requires management action.

Market Demand Report

- Market Demand Analyzer – Available by Industry or Commodity and Country

Market Demand by End-market Sectors: Investment Goods & Intermediate Sales to Other Industry and Service Sectors

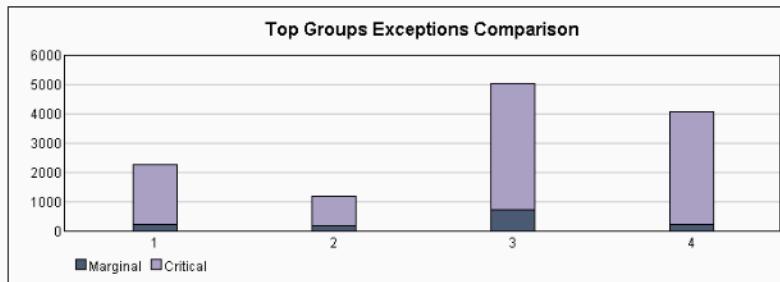
- Agriculture
- Mining & Minerals
- Food
- Textiles, Wearing Apparel, Footwear
- Wood & Furniture
- Paper & Publishing
- Basic Chemicals
- Fertilizers & Pesticides
- Misc. Chemical Products
- Pharmaceuticals
- Soaps & Cleaning Preparations
- Non-Metallic Mineral Products
- Basic Metals
- Machinery except Computers
- Computers & Peripherals
- Electrical Machinery
- Telecom. & Semiconductors
- Motor Vehicles
- Other Transport Equipment
- Professional & Optical Equip.
- Miscellaneous Manufactures
- Utilities
- Construction
- Wholesale & Retail Trade
- Restaurants & Hotels
- Transport & Storage
- Communication
- Financial & Insurance
- Real Estate & Business Services
- Personal Services

Market Demand by End-market Sectors: Personal Consumption Expenditure and Government Purchases of Finished Goods

- Personal Consumption Expenditures
- Food, beverages and tobacco
- Clothing & Footwear
- Housing
- Furniture & Household equipment
- Household operations
- Medical care and health expenses
- Personal Transportation
- Other transportation & communications
- Leisure
- Entertainment and cultural
- Personal Care
- Restaurants, cafes and hotels
- Other services

Quarterly Application Exception Report for Top Groups

Q2 2003



Label	Group	Marginal Exceptions	Critical Exceptions	Total Exceptions	Average Daily Traffic Class Count
1	Dev.net Compression Shapers	267	2,042	2,309	162
2	GroupA	228	1,003	1,231	147
3	GroupB	779	4,322	5,101	474
4	Kris-CompressionLab	281	3,865	4,146	581

Benefits of MIS

- It improves personal efficiency.
- It expedites problem solving(speed up the progress of problems solving in an organization).
- It facilitates interpersonal communication
- It promotes learning or training.
- It increases organizational control.



- It generates new evidence in support of a decision.
- It creates a competitive advantage over competition.
- It encourages exploration and discovery on the part of the decision maker.
- It reveals new approaches to thinking about the problem space.
- It helps automate the Managerial processes.



MIS (Management Information System) tools:

1.ERP Systems (Enterprise Resource Planning):

- Examples: SAP ERP, Oracle ERP Cloud, Microsoft Dynamics 365

2.CRM Systems (Customer Relationship Management):

- Examples: Salesforce, HubSpot CRM, Zoho CRM

3.Business Intelligence (BI) Tools