



RAPID REVISION MATERIAL FOR MICS

PREFACE

1. First of all, read the chapter thoroughly from study material provided by the ***Mr. GANAPATHI.***
2. After reading the chapter from the study material, memorize the chapter from this notes for each topic.
3. Be clear with the chapter while you are reading it in the material of ***SUPERWHIZZ***
4. It is preferable to go for this material after a thorough knowledge of the concepts since this is an extract of what was present in the material
5. Some of the chapters presented here are just an outlay since the chapter condensation is not possible at large.
6. Whenever you wish to revise the chapter, you will get it within 5 minutes.

Using this notes entire syllabus of MICS can be revised within 2 1/2 hours.

HERE IS SOME ANALYSIS REGARDING CHAPTERS

CHAPTERS-1,2,3,4,5	LOGICAL CHAPTERS
CHAPTERS-7,8,9,10,11	DEVELOPMENT AND DEPLOYMENT
CHAPTERS-13,14,15,17,18	MONITORING & CONTROLLING
CHAPTERS-6,12,16,19	TECHNICAL & OTHER

This way you can revise the syllabus of MICS 4 to 5 times in examination period.

BEST OF LUCK FOR YOUR PREPARATION

CHAPTER – 1

BASIC CONCEPTS OF SYSTEMS

“A System is a set of inter-related elements that operate collectively to accomplish some common goal”.

TYPES OF SYSTEMS

1. ACCORDING TO COMPONENTS /ELEMENTS

Abstract System

It is an orderly arrangement of independent ideas or constructs.

Physical System

It is set of elements which operate together to accomplish an objective

It consists of physical elements rather than ideas.

2. ACCORDING TO BEHAVIOUR

Deterministic & Probabilistic system

- A deterministic system operate in a predictable manner
- Interaction among parts with certainty
- Description of the state + description of its operation = next state of the system
Eg: prediction of demand.

3. ACCORDING TO LEVEL OF INTERACTION

Closed system

- Self contained and rarely receives input from the outside
- No interaction across its boundary.
- Relatively closed system (it is a closed but not completely closed system).



Open system

Actively interacts with other systems, establishes exchanges relationships

Behave as relatively closed system to preserve their identity and autonomy



SYSTEM ENVIRONMENT

- The features that define and describe a system, form its boundary
- System is inside the boundary
- Environment outside the boundary

SUB-SYSTEM

It is a part of larger system.

Inter-connections & interactions between the sub-systems are called *interfaces*.

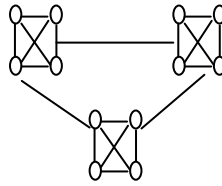
Decomposition

It is the process of dividing a system into sub-systems and so on.

This process is continued until smallest subsystem is of manageable size

Simplification

It is the process of organizing sub-system to simplify their inter-connections (clusters of sub-systems are established).



Preventing system entropy

Decay or become disordered

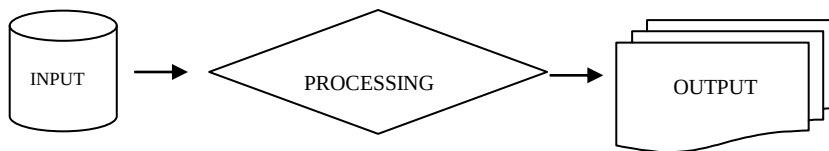
- System Entropy means decay, disorder of a system.
- Negative entropy is the process of preventing entropy by input of matter, repair, replenish & maintenance.

System Stress & System Change

- A stress is a force transmitted by a system's supra-system that causes a system to change.
- It arises due to 2 reasons :-
 - ➔ Change in the goal &
 - ➔ Change in the achievement level.
- Systems accommodate stress through structural changes or process changes.

Supra-system

It is an entity formed by a system / sub-system and its related systems / sub-system



Characteristics

- ➔ Timeliness
- ➔ Purposeful
- ➔ Mode and Format (visual, verbal or written)
- ➔ Redundancy
- ➔ Rate of transmission (bits per minute)
- ➔ Frequency (daily, weekly, or monthly)
- ➔ Completeness
- ➔ Reliability
- ➔ Cost-Benefit Analysis
- ➔ Validity
- ➔ Quality

VALUE OF INFORMATION (READ IN MATERIAL)

Business Information System

- Transaction Processing System
- Management Information System
- Decision Support System
- Executive Information System
- Expert System (Artificial Intelligence) – It replace the need for human expertise. It is useful for a specific area e.g. taxation problem, refinery, etc.

CHAPTER – 2

TRANSACTION PROCESSING SYSTEM

“Transaction processing systems are computerized systems that perform and record the daily routine transactions necessary to conduct the business. Captures data and information reporting”.

TRANSACTION PROCESSING CYCLE

- ➔ Revenue cycle
- ➔ Expenditure cycle
- ➔ Production cycle
- ➔ Finance cycle

Components of transaction processing system

- ➔ Input
- ➔ Processing (on-line processing, batch processing)
- ➔ Storage
- ➔ Output

PLEASE REFER MATERIAL FOR FURTHER DETAILS

CHAPTER-3

BASIC CONCEPTS OF MIS

“MIS as an approach that visualize the organization as a single entity composed of various inter-related and inter-dependent sub-systems to provide timely & accurate information for management decision making, which leads to the optimization of overall enterprise goals”

- **MIS** is a network of information that supports management decision making.
- It uses the information resource for effective & better achievement of organizational objectives.

M I S

Management

- Determining the objectives
- Developing plans
- Securing & organizing various resources
- Exercising adequate controls
- Monitoring the results

Information

- Reprocessing of data & putting them into a meaningful & useful context

System

- Consisting of a number of elements operating together for accomplishment of an objective.

Characteristics of an effective MIS

1. *Management oriented* [Development of MIS starts from the need of the management]
2. *Management directed* [management actively directs the MIS development]
3. *Integrated* [all the information sub-system works as a single entity]
4. *Common Data Flow* [common input, processing & output procedures & media]
5. *Heavy planning element* [consumes substantial time to develop]
6. *Sub-system concept* [entire MIS is divided into smaller sub-systems]
7. *Common Database*
8. *Computerized*

Misconceptions about MIS/Myths about MIS [and their clarifications]

1. **The study of management information system is about the use of computers**
 - a. [it may or may not involve computers]
2. **More data in reports means more information for managers**
 - a. [quality of data and not the quantity of data is relevant]
3. **Accuracy in reporting is of vital importance**
 - a. [Information may be approximate. Accurate information involves higher cost]

PRE-REQUISITES OF EFFECTIVE MIS

- ➔ Database and DBMS
- ➔ Qualified system & management staff
- ➔ Support of Top management
- ➔ Control & maintenance of MIS
- ➔ Evaluation of MIS

CONSTRAINTS IN OPERATING MIS

- Non availability of experts
- Difficulty in dividing MIS into sub-systems
- MIS is non standardized
- Non co-operation from staff
- Difficult to quantify the benefits of MIS
- High turnover of experts in MIS

EFFECTS OF USING COMPUTER MIS

- ➔ Speed in information processing & retrieval of data increases
- ➔ Scope of use of information system has expanded
- ➔ Scope of analysis widened
- ➔ Complexity of system design and operation increased
- ➔ Integrates the working of different information sub-system
- ➔ Increases the effectiveness of information system
- ➔ More comprehensive information

LIMITATIONS OF MIS

- a. Effectiveness of MIS depends upon the quality of input and process
- b. Not a substitute of effective management
- c. MIS lacks flexibility
- d. MIS cannot provide tailor made information packages
- e. Ignores the non quantitative factors (attitude & morale)
- f. Useless for non programmed decisions
- g. Difficult to maintain privacy & secrecy
- h. MIS effectiveness decreases with frequent changes in top management organizational structure and operational team

INFORMATION NEEDS OF MANAGERS

“Information is the substance on which business decisions are based”

TYPES OF INFORMATION

Environmental Information

- Govt. policies
- Factors of production
- Technological information
- Economic trend

Competitive Information

- Industry demand
- Firm demand
- Competitive data

Internal Information

- Sales forecast
- Financial budget
- Supplier factors
- Internal policies

INFORMATION REQUIREMENT

Operational function

Grouping of functional activities on the basis of related activities into a sub-system

Types of decision making

REFER NOTES FOR CONVINIENCE

Level of management activity

REFER NOTES FOR CONVINIENCE

LEVELS OF MANAGEMENT & THEIR INFORMATION REQUIREMENT

Top Level (Strategic Level)

- Determining the overall goals & objectives
- Economic / political / social information
- Competitive information

Middle Level (Tactical Level)

- Sales Manager, Purchase Manager, Finance Manager
- Most of the information is internal
- Demand & supply information

Supervisory Level
→ Section officers, Foreman
→ Instruct and supervise employees
→ Make routine & day to day decisions.

Database is a super-file that consolidates & integrates the data that was previously stored in different files.

CHAPTER – 4

SYSTEMS APPROACH & DECISION MAKING

System Approach to Management

- ⇒ It's a way of thinking about management problems.
- ⇒ Each problem should be examined in its entirety and effect of the proposed changes to each part of the organization
e.g. changing from batch production to continuous production will affect finance, warehousing, purchase department, etc.

Steps involved in decision making

1. Defining the problem
2. Analyzing the reasons
3. Identifying the alternative solutions
4. Evaluation of the same
5. Selection of the best alternative
6. Implementation of the solution

Decision-Making

- ⇒ It is a never-ending process of choosing a particular course of action out of several alternative courses for achievement of desired goals.
- ⇒ Pre-decisional, decisional & post-decisional functions are performed by management.

Classification of decisions

1. Programmed & non-programmed decisions
2. Strategic & tactical decisions
3. Individual & group decisions

Model

A model is created with help of simulation techniques in such a way that it behave exactly in the same way as the real life system

- Define the problem
- Define the objectives
- Create a model with the help of simulation techniques
- Collect sample data
- Feed the sample data in model & collect result
- Compare the results with real life system and refine the model if necessary
- Then use model in decision making to study a large number of characteristics before selecting a most suitable alternative.

Functional Information Areas

Finance & Accounting	Production	Marketing	Personnel
Financial decision making involves decision regarding procurement & effective utilization of funds. - Estimation of funds & the timing. - Capital structure. (Optimum Mix) - Capital budgeting (Investment) - Profit planning - Tax management - Working capital management - Current Assets management.	⇒ Production Planning ⇒ Production Control ⇒ Material requirement planning (MRP) Production Planning ⇒ What to produce ⇒ When to produce ⇒ How to produce.	Marketing bridges the gap between the firm & its customers. - Sales support & analysis. - Market research & intelligence. - Advertising & promotion. - Product development & planning. - Product pricing - Customer service <u>3 types of information</u> - Internal - Competitive - Environmental	⇒ Proper recruitment ⇒ Placement ⇒ Training ⇒ Compensation ⇒ Maintenance ⇒ Health & Safety <u>Sources of information</u> ⇒ Accounting information system ⇒ Payroll processing ⇒ Cost estimating for wage neogatiations

CHAPTER – 5

DECISION SUPPORT

&

EXECUTIVE INFORMATION SYSTEM

Decision Support System

- ⇒ It is a system that provides tools to managers to assist them in solving semi-structured & unstructured problems (it is not a means to replace the management).
- ⇒ Programmed Decision System replace human decision making (no management is involved).

Properties of DSS

1. Support semi-structured & unstructured decisions
2. Ability to adapt the changing needs
3. Ease of learning & use

Components of DSS

1. Users → (Managers)
2. Databases
3. Planning Languages (General purpose, special purpose)
4. Model Base (Brain of the DSS, custom developed)

Tools of DSS

1. Data based software
 2. Model based software
 3. Statistical software
 4. Display based software
- } Integrated Tools combines all these software in one package.

Example DSS in Accounting

2. Cost Accounting System (Generally used in Health Care industry)
3. Capital Budgeting System (Calculates NPV, IRR of various projects)
4. Budget Variance Analysis System (Forecasting budget & analyzing variances)
5. General Decision Support System, etc.

Executive Information System

1. It is a DSS designed to meet the special needs of top-level management and having additional capabilities such as e-mail.
2. It provides on-line access to information in a useful & navigable format (mouse & touch screen driven, pictorial & graphical presentation).

Types of planning by top level management

- ⇒ Executives
- ⇒ Executive roles and decision making
- ⇒ Strategic Planning (CEO level)
- ⇒ Tactical Planning (Planning to carry out Strategic Planning)
- ⇒ Fire Fighting (Major damage, new competitor, strike)
- ⇒ Control (General controls)

Characteristics of Information obtained in EIS

- Lack of structure
- High degree of uncertainty
- Future Orientation (Economic trend, govt. decision, consumer choice, competitor, etc.)
- Informal source
- Informal Source
- Low level of details

READ THE REST OF MISCELLANEOUS TOPICS IN THE MATERIAL