

Information Systems Control and Audit

Previously.. Friends U might be saying.....



ISCA = ISCA Subject is **C**omplex **A**bsolutely.

Please... can U give me Opportunity... as..I have...

ISCA = Idea! to.. **S**implify **C**ourse **A**together.

- CA. Vipul Dhulla, [C.A., D.I.S.A]



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You will surely agree & say that....



ISCA = It's Scoring Course Actually.

And shall also have confidence now, as...

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Do tell...more on which subject you would like to have a book – more user friendly & exam-oriented.. & its method & source, as we all together share this knowledge and will benefit students community at large.

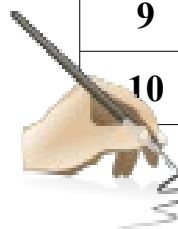
So feel, free to give YOUR VALUABLE VIEWS at email : vipul@dhullasir.com

- C.A.Vipul Dhulla – C.A.,D.I.S.A.[I.C.A.I]

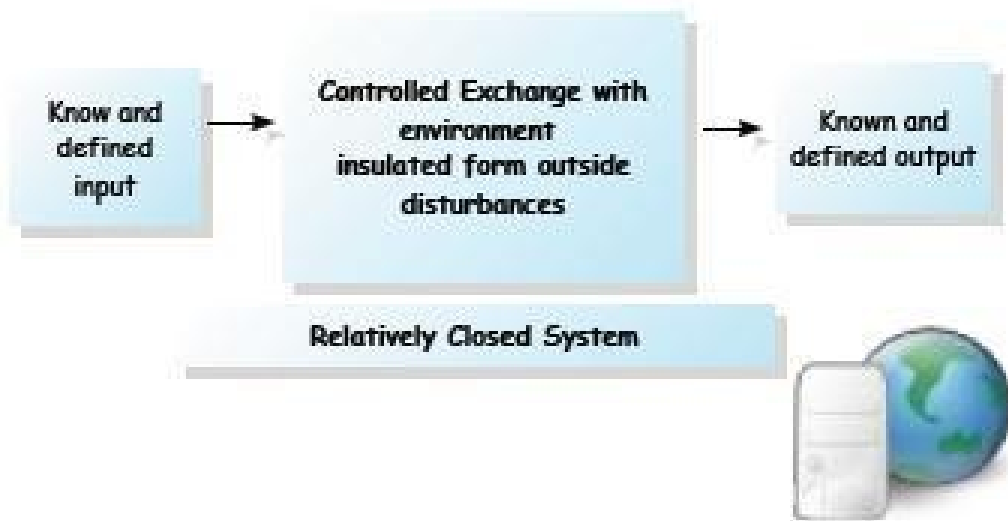
***“Knowledge is Power,
Sharing it Gains, But Selfishly Storing it Pains”***

C.A.FINAL :- I.S.C.A.

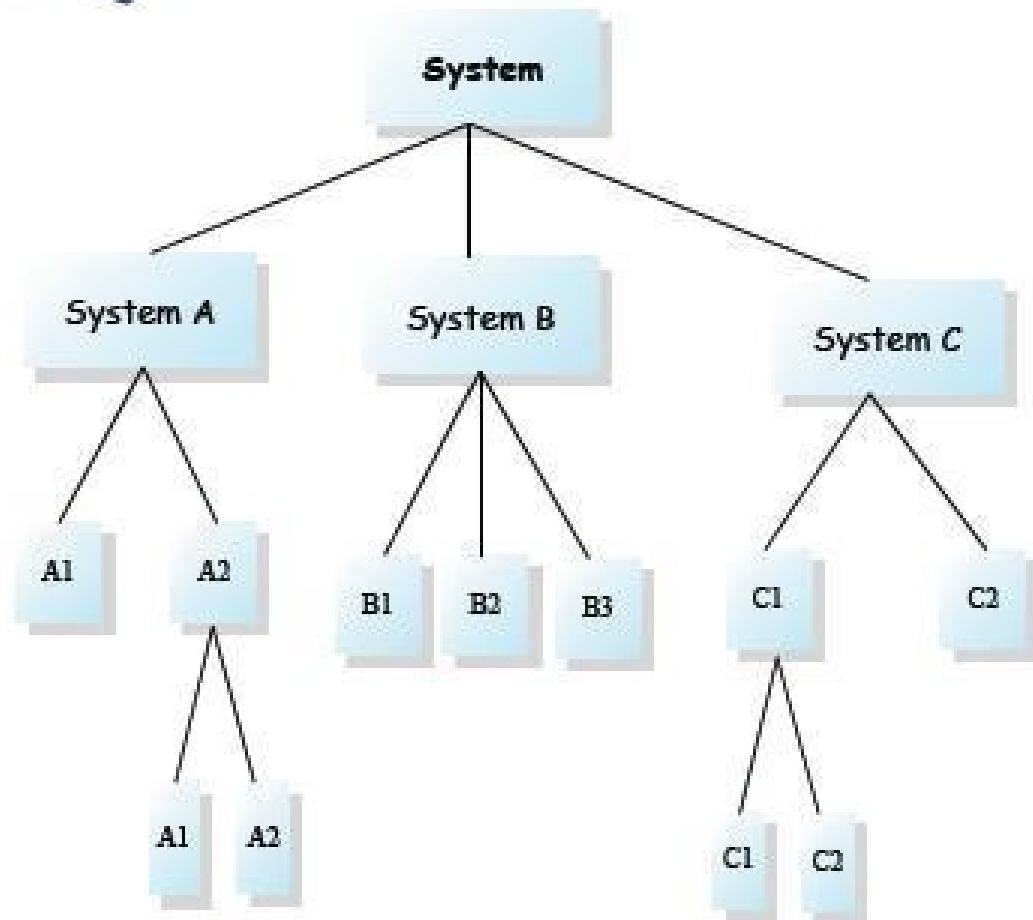
<i>Chp. No.</i>	<i>Name</i>
1	Information System Concept
	a. Basic Concepts of Systems
	b. Transaction Processing System
	c. Basic Concepts of MIS
	d. Decision Support and Executive Information Systems
2	System Development Life Cycle
	a. System Development Process
	b. Systems Design
	c. System's Acquisition, Software Development and Testing
	d. Systems Implementation and Maintenance
3	Control Objectives.
4	Testing : General and Automated Controls
5	Risk Assessment Methodologies and Applications
6	Business Continuity Planning and Disaster Recovery Planning
7	An Overview of Enterprise Resource Planning (ERP)
8	Information Systems Auditing Standards, Guidelines, Best Practices.
9	Drafting of IS Security policy, Audit Policy, IS Audit Reporting – a practical perspective.
10	Information Technology Act, 2000



- by C.A.VIPUL DHULLA [C.A., D.I.S.A. (I.C.A.I.)]

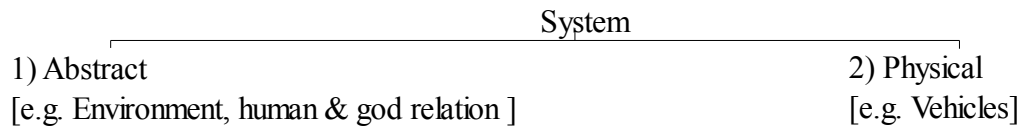


BASIC CONCEPT OF SYSTEMS



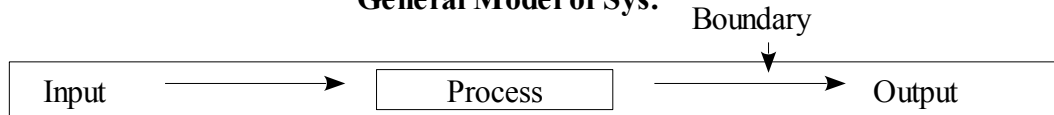
Definition of a system :-

- as a set of interrelated elements // that operate collectively // to accomplish some common purpose or goals.
- Human body → living sys.
- Business in sys. → where economics resources (M4) are transformed by organization process into g/s.
- System can be



- Abstract sys. = orderly arrangement of inter dependent ideas or constructs.
- Physical sys. = set of elements which operate together to accomplish an objective.
- e.g. : circulatory sys. (blood vessels), transportation sys. (vehicle), weapons, school, computer sys., A/c. Sys.
-

General Model of Sys.

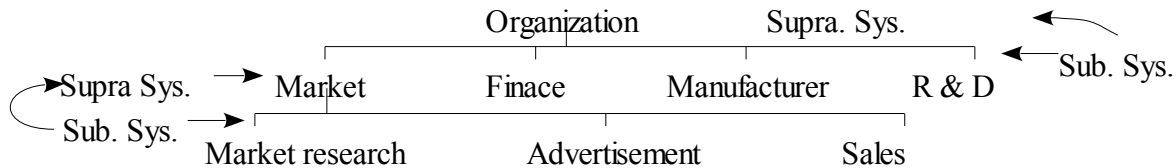


Sys. is inside Boundary & environment is outside.

Illness in system is called Entropy. Entropy can be reduced by maintenances, that is by negative entropy.

Sys. Environment :-

- All sys. functions within some sort of environment
- Environment like the sys. is a collection of elements
- There are many types of sys. & environment
- The features that define & delineate a sys. form its boundary
- A sub.sys. is a part of large sys.
- Each sys. has sub.sys., which in turn made of sub.sys. being delineated by its boundaries.
- A Supra sys. refers to the entity formed by a sys. & other equivalent sys. with which it interacts.



Decomposition :-

- A complex sys. is difficult to comprehend when considered as a whole
- Therefore sys. is decomposed or factored into sub.sys.
- Boundaries & interface are defined, so that the sum of sub.sys. constitutes the entire sys.
- Process of decomposition is continued with sub.sys. divided into smaller sub.sys, until the smallest sub.sys. are of manageable size.
- If the task is to design & prog. a new sys., the sub.sys. is major application
- Decomposition into sub.sys is used to analyze an exiting sys & to design & implement a new sys.

For more on :[Simplification, Modules, Stress & system Change] Pl. refer earlier syllabus "Management Information & Control System " – Chapter 1

Characteristics of a Business System

- Business is also System – (as seen in above digram of Organization)
 1. All systems work for predetermined objectives & it is designed and developed accordingly.
 2. It has a number of interrelated & interdependent sub.sys. / components - cannot function in isolation.
 3. If one sub.sys /component – fails = whole sys fail. However, it depends on how they are interrelated.
 4. The way a sub.sys. works with another subsys. is called interaction. This is to achieve the goal of the system
 5. The work done by individual subsystems is integrated to achieve the central goal of the system. The goal of individual subsystem is of lower priority than the goal of the entire system.


Nature and Type of System

Sys can be Manual sys [- absolutely by human efforts] or Automated system. Computer-based sys helps in business

functions is a better cost-performance ratio compared to that of traditional labour intensive manual systems.

Major areas of computer-based applications [or say sub sys]

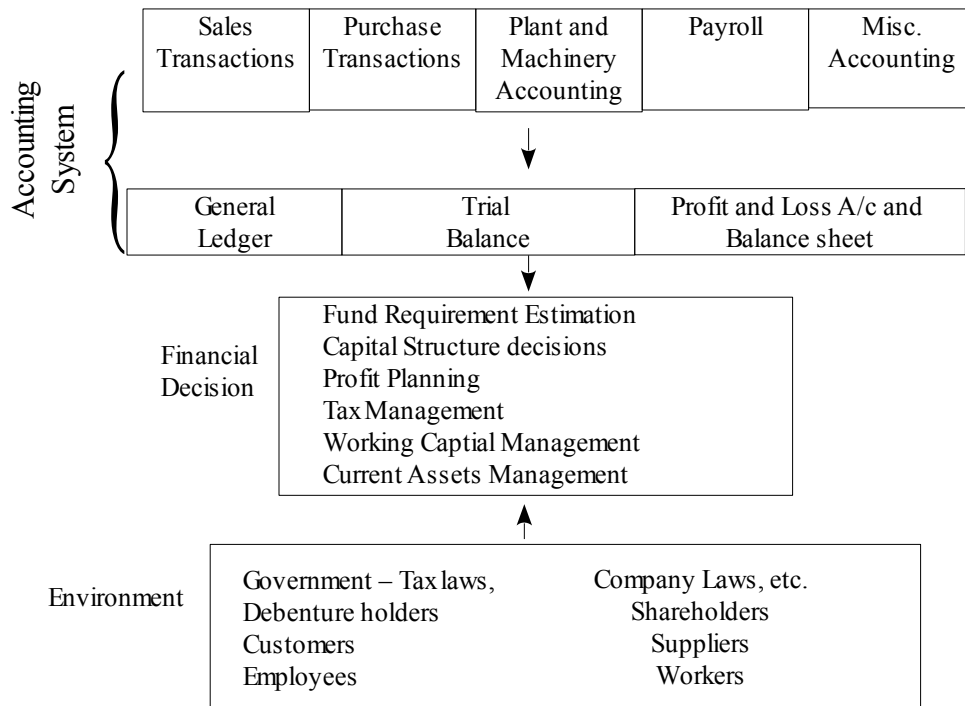
in Earlier syllabus “Management Information & Control System” it was indicated as “FMPP - [Finance, Marketing, Production & Personal] in chapter 4 [for more on Material Resource Planning, 6 sub.sys of Personal sys, etc do refer chapter 4 -'System Approach & Decision Making']

 (keyword : FMPP : note .. this will be used again and again.)









1. Finance and Accounting

The main goal - ensure financial viability of the organization, enforce financial discipline and plan and monitor the financial budget.

- Accounting cover – classification of financial transaction & summarization into standard financial statement.
- Finance sys ensures adequate organization financing at a low cost as to maximise return to Share Holder.
- Two imp. Aspects. :
 1. Procurement of Fund and 2. Effective utilisation of fund.



Flow of information for making financial decision

	<i>BEFORE START AHEAD PLEASE UNDERSTAND WHAT QUESTION U HAVE TO ASK YOURSELF SO THAT ALL OTHER FUNCTION ARE KNOWN EASILY</i>
	
	QUESTION + HINT:
	1. Objective, Meaning, Definition, Required for what analysis ?
	2. How information need of Manager are satisfied
	3. How its useful + W5 [Why, When, Where, What and Who]
	4. source of information & interface (so u will need  Keyword : ICE ←, GIFT (GEFT) + ICICI 😊hmm...got it ...)

2. Marketing and Sales

- Aim - running a business successfully in a competitive environment.
- Objective - to maximize sales and ensure customer satisfaction.
- It facilitates the chances of order procurement by marketing the products of the company, creating new customers and advertising the products.
- They may use an order processing system to keep status and track of orders.

- It may also generate bills for the orders executed and delivered to the customer.
- Warrant period service requires huge d/b.
- Analyzing the sales data by category - region, product, salesman, etc. Also help in providing commission.

3. Production or Manufacturing

- Objective - to optimally deploy [M3] man, machine and material to maximize production or service.
- The system generates production schedules and schedules of material requirements, monitors the product quality, plans for replacement or overhauling the machinery.
- It also helps in overhead cost control and waste control.
- A whole new discipline – Computer Aided Design and Computer Aided Manufacturing
- (CAD / CAM) has evolved due to application of IT and using this technology quick change in design and manufacturing process is possible to examine the possibilities of various alternatives.

4. Inventory / Stores Mgt

- Raw material is major cost. Delay may create problem, so also excess may create additional cost. Hence require Inventory sys to maintain optimum level.
- Its is designed with a view to keeping track of materials in the stores.
- The system is used to regulate the maximum and minimum level of stocks, raise alarm at danger level stock of any material, give timely alert for re-ordering of materials with optimal re-order quantity and facilitate various queries about inventory like total inventory value at any time, identification of important items in terms stock value (ABC analysis), identification most frequently moving items (XYZ analysis) etc.
- Similarly well-designed inventory management system for finished goods and semi-finished goods provides important information for production schedule and marketing/sales strategy.

5. Human resource mgt.

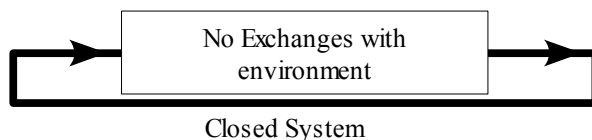
- Human resource = most valuable asset for an org. Utilization of this resource in most effective and efficient way is an important function for any enterprise. Less disputes, right utilization of manpower and quiet environment in this functional area will ensure smooth sailing in business.
- Skill database maintained in HRM system, with details of qualifications, training, experience, interests etc helps management for allocating manpower to right activity at the time of need or starting a new project.
- This system also keeps track of employees’ output or efficiency.
- An HRM system may have the following modules [e.g. peoplesoft]
 - Personnel administration
 - Recruitment mgt
 - Travel mgt
 - Benefit administration
 - Salary administration
 - Promotion mgt

An ideal HR development emphasizes an optimal utilization of human resource by introducing a consistent and coherent policy aiming at promoting commitment to the enterprise. The HRM system assists to achieving this goal.

Types of System

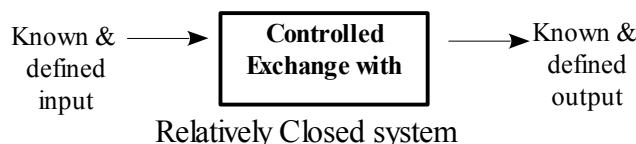
i) Deterministic	probabilistic
* given nature of input we can reasonably predict output. e.g. A/c. Sys.	* given nature of input, we cannot predict output. e.g. Inventory sys. are average demand & time for replenishment

ii) Closed systems



- it is self contained & does not interaction
- no feedback
- tend to deteriorate

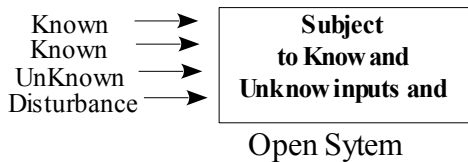
iii) Relatively Closed systems



- Mfg. Process can operate without disturbance from supplier. Etc.
- Effective.
- E.g. :Computer sys.
- It is require to preserve their identity & autonomy.
- They may ignore many opportunities so as to maintain

their core-competence

iv) Open Sys.



- Interact with other sys., get random & undefined inputs
- It tend to have form & structure to allow them to adopt to change in their external environment for survival & growth

CHARACTERISTICS (ATTRIBUTES) OF INFORMATION

Information : processed data – has a surprise value for the user – it is necessary for mgt. - in Decision Making (DM) & survival of an entity → depends on Right decision at right time based on right information available. It's Characteristics are :-

1. Availability (Timeliness) :

- There is a saying ' Justice delayed is Justice denied ' same can be converted to ' Information delayed is Information denied', as only timely information will generate effective decision.

2. Purpose :

- Information must have an objective to which it is addressed – as people have variety purpose. The basic purpose is to inform, evaluate, persuade, & organize – It must help create new concepts, identifying problems, solving problems, DM, Planning , initialing & controlling (*think : POSCORD ...hummm...*)

3. Mode & format :

- Business Information can be presented as visual, verbal or written information
- The selection of format shall be based on the purpose for which the information is being used. Use of table, graphs, reports for information communication need to be evaluated based on purpose of DM
- Relevance to problem must be only their &/ or highlighted like in Audit report : entire detail is required – but variance & deviation are highlighted.

4. Decay & Redundancy :

- Fresh or live data to be used as far as possible. [Decay]
- It means excess of information carried per unit of data. [Redundancy]
- E.g. 75% of letter used in phrase are usually redundant. However, in business situation redundancy may sometime necessary to safeguard against error in the communication process.
For e.g. the correspondence, in contract may carry figure like '4' followed by (FOUR)

5. Rate of transfer :

- Means the transmission / receipt rate of information.
- It is generally denoted as character per second
- Speed depends upon the communication media, lines & acceptance speed of receiver.

6. Frequency :

- The Frequency with which information is transmitted or received affects its value.
- The periodicity for generation of information. For e.g. Internal audits are usually done monthly / bi-monthly or quarterly
- Frequency directly linked to level of mgt.,i.e. the information is being send to whom.

7. Completeness :

- Purpose of information is to helpDM .∴ no missing link. E.g. Not just give ROI & NPV but also give mean, standard deviation, shape of distribution of ROI & NPV (Hartz's model of investment) → this will help in DM.

8. Reliability :

- Confidence level of information must be indicated, so as to help user (Internal / External) - ∴ always check & survey error rate

9. Cost benefit analysis :

- Benefit to be justify with cost
- For cost : use of cost sheet but Benefit (tangible + intangible) : however to analysis it – all managerial statement into

categories on degrees of importance

1. Absolute st. : → cannot be discontinued whatever be cost of preparing it.
2. Necessary st. : → may have high cost but may be discontinued in very stringent circumstance
3. Normal st. : → they can be discontinued / replaced if their cost is high.
4. Extra st. : → which are prepared only if benefit arising out of them is substantially high.

10. Validity :

- If it does not reveal directly what we want to know for DM, its not transparent.

11. Quality :

- Information not be spoiled by personal bias.
- No error : ❌ use Internal control, etc...
- Accuracy should not be made a fetish for e.g. Sale forecast for group of product can well be rounded off to thousands of rupees.

12. Transparency :

- If information does not reveal directly what we want to know for decision making, it is not transparent

13. Value of Information :

- Given a set of possible decision, a decision maker may select on on basis of such information in hand.
- Value of New Information = Outcome of New decision – Outcome of old decision – cost of obtaining information.

key word:



1. Real Purpose of Completing formate with high freq rate - is that quality cost analysis is available without decay for better transparency & validity – to make it valuable.
2. Real Time Purpose of Quality Male / Female is – complete work Frequency by Redundancy – at Valid Rate – to get Valuable Cost benefit with Transparency
3. R.T.P. M/F (mode & format) of Ca Final 2R Cost effective, Valuable, Transparent & Very Qualitative

Keyword 1	
Real	Reliability
Purpose	Purpose
of Completing	Completeness
Formate	Mode & format
with high	--
freq	Frequency
rate	Rate
is that quality	Quality
cost analysis	Cost benefit analysis
is available	Available
without decay	Decay
for better	--
Transparency	Transparency
& validity	Valid
- to make it	--
Valuable	Value

Keyword 2	
Real	Reliability
time	Timeliness
purpose	Purpose
of Quality	Quality
M/F	Mode & format
is	--
Complete	Completeness
work	--
Frequency	Frequency
by	--
Redundancy	Redundancy
at	--
Valid	Validity
Rate	Rate of transfer
for	--
Cost benefit	Cost benefit analysis

Keyword 3	
R	Reliability
T	Timeliness
P	Purpose
M/F	Mode & format
Of	--
Ca	Completeness
Final	Frequency
2:R	Redundancy
R:R	Rate of transfer
Cost effective	Cost benefit analysis
&	--
Very	Validity
Qualitative	Quality

Categories of Information sys.

Transaction
Processing Sys. (TPS)

Management
Information Sys.
(MIS)

Decision Support Sys.
(DSS)

Executive Sys. (EIS)

Expert
Sys.

Internal Data = TPS ;
TPS + Process ... = MIS ;
MIS + External data = DSS ;
DSS + utilities = EIS

