




Management Accounting - A Perspective



Objectives of this unit - 1 : Management Accounting - A Perspectives are to give an over all idea about (i) Management (ii) its functions (iii) effective nature of organization on its objectives and management (iv) position of accounting in the management process and (v) the role of management accounting. So fulfill the stated objectives, the unit is designed to have the following three lessons :

-  Management and Organization
-  Accounting and its Branches
-  Role of Management Accounting

School of Business

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Lesson 1: Management and Organization

Learning Objectives

After completing this lesson, you are expected to be able to:

- Explain 'management' and 'strategic management' and their relationship.
- Explain the planning and control cycle.
- Explain the environment within which an organization performs.
- Understand different economic systems.
- Understand the relationship between management thoughts and their accounting implications.
- Understand the recent development theories and their accounting implications.

Introduction

For proper understanding of the role of management accounting, discussions will remain imperfect without a minimum knowledge of management, because management accounting is considered to be the main supplier of relevant information for managerial decision-making. Moreover, management as a discipline is dynamic. It always tries to adjust itself to the changing environment. The continuous development of human knowledge, changes in social, cultural and legal environment, attempts to more globalization have brought changes in the management concepts and processes. A management accountant, to be a useful supplier of relevant information, must know the changes in management and must either adjust or modify his/her tools and techniques to suit the current environment.

Management-its Nature and Purpose :

Heinz Wehrich and Harold Koontz :

"Management is the process of designing and maintaining an environment in which individuals, working together in groups, efficiently accomplish selected aims."

If this definition is expanded further we will get the following as functions of management : (i) Planning (ii) Organizing (iii) Staffing (iv) Leading and (v) Controlling.

In each stage, management accounting supplies relevant information. same will be applicable to strategic management also.

Strategic Management - its Nature :

Samuel C. Certo and J. Paul Peter :

'a continuous, interactive process aimed at keeping an organization as a whole appropriately matched to its environment.'

Strategic management emphasizes that managers engage in a services of

steps like (i) performing environment analysis; (ii) establishing organizational direction, (iii) formulating organizational strategies (iv) implementing organizational strategies and (v) exercising strategic control.

Important Terms Used in Strategic Management:

Strategy: "A set of goals and their action plans for a particular organizational level."

Goal set: "A collection of objectives and targets for a particular organizational level."

Action plan: "A description of the means by which activity is expected to be directed toward striving for specified objectives and targets."

Master Strategy: "Master strategy, overall strategy and strategy set are used interchangeably to identify the particular collection of strategies that characterizes the firms major thrusts."

Business strategy: "A set of goals and related action plans that together define how a business should compete within its business segment" is termed as business level strategy.

Goal Levels and the Organization Entities

Goal Levels	Integrates	Guides behavior of
Societal	Organization with environment	Corporate leaders
Corporate	Business Units	Corporate Staff
Business	Functional departments	Business managers
Functional	Work units	Functional managers

Source : Dan Sahendel and Charles A. Hofer [Strategic Management : A View of Business Policy and planning.]

Types of Offensive and Defensive Postures

Offensive	Defensive
1. Concentration : (a) Market penetration (b) Market development (c) Product development (d) Horizontal merger 2. Integrative growth : (a) Backward integration (b) Forward integration 3. Diversification growth : (a) Concentrate diversification (b) Conglomerate diversification	1. Retrenchment / turnaround (a) Shallow retrenchment (b) Deep retrenchment (c) Reorganization (control of faulting business) 2. Divestiture : (a) Sell-off (b) Spin-off (c) Split-off 3. Liquidation : (a) Voluntary closure (b) Assignment (Transfer to third party) (c) Bankruptcy

- | | |
|---|-------------------------------------|
| 4. Joint venture :
(a) Unrelated partners
(b) Related partners
(c) Dual - nationality partners | 4. Harvesting
5. Captive Company |
|---|-------------------------------------|

Source: Comerford and Calaghan : Strategic Management

In each stages of management process, decision-makers need information to suit their decision-model from both internal and external sources. Management accountant may take the responsibility of supplying internally generated information.



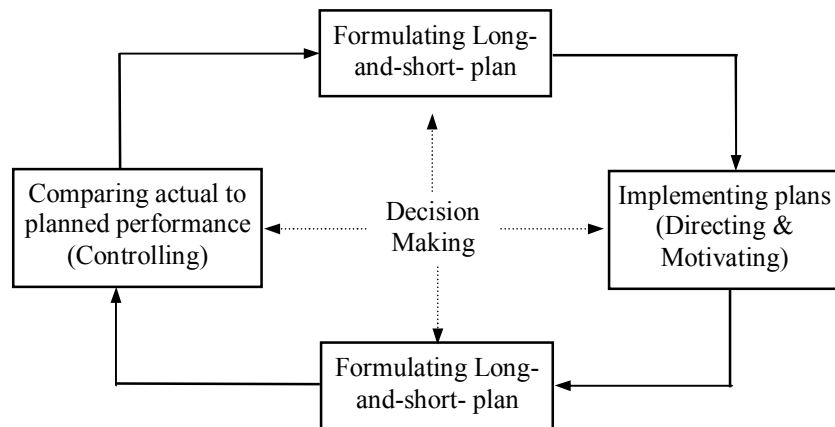
Comparison of Strategic Management Responsibilities and General Management Steps

Strategic Management responsibilities	Management steps
1. Establishing the mission : Example : Continuous Growth : It includes nature of business, fundamentals to be followed. It is enduring and timeless.	Long-range planning
2. Formulating a company philosophy : Establishing the beliefs, values, attitudes and unwritten guide.	Do
3. Establishing policies : Deciding on plans of action to guide the performance of all major activities, out strategies in accordance with company philosophy.	Planning
4. Selling objectives : Deciding on achievement targets within a defined time range.	Planning and Controlling
5. Developing strategies : Developing concepts, ideas, and plans for achieving objectives successfully and meeting and beating competition.	Planning
6. Planning the organization structure : Developing the plan of organization and the activities that help work together to perform.	Organizing and Planning
7. Providing personnel : Recruiting, selecting, and developing people to fill positions.	Organizing
8. Establishing procedures : Determining and prescribing how all important and recurring activities will be carried out.	Organizing and Directing
9. Providing facilities : Providing the plant, equipment and other physical facilities required to carry on the business.	Organizing

10. Providing capital : Making sure the business has money and credit needed for working capital and physical facilities.	Organizing
11. Setting standards : Establishing measures of performance that will enable the business to best achieve its long term objectives.	Controlling
12. Establishing management programs and operational plans : Developing programs and plans governing activities and the use of resources.	Planning
13. Providing Control Information : Supplying facts and figures to help people following the strategy, policies, procedures and programs.	Controlling
14. Activating people : Commanding and motivating people to act in accordance with philosophy, policy, procedures and standards in carrying out plan.	Directing and motivating

The Planning and Control Cycle:

Garrison and Noreen summarized the work of management in a cycle termed by them as "the planning and control cycle model". This model shows the smooth flow of management activities from planning through directing and motivating, controlling and then back to planning again.

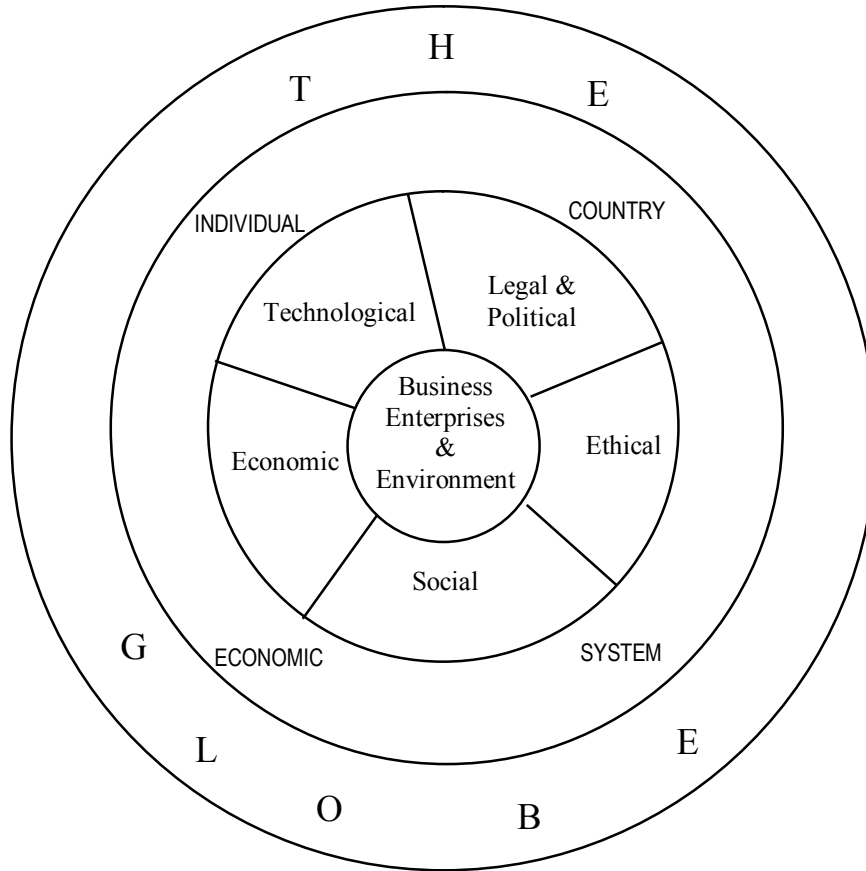


Management accounting has to supply information to each step of management. As these are unicycle, these activities will always continue. The role of management accounting will be explained in the third lesson of this unit.

The Business Environment:

Business enterprises work in a pluralistic society, in which many organized groups represent various interest. Each group has an impact on other groups. But an enterprise must try to satisfy the interest of all the groups as far as possible. Otherwise, there may be conflicts. In some

cases, some of the elements of the environment may restrict the certain types of business activities. In every step, every enterprise must take all these into account. As supplier of relevant information an accountant should also have sufficient knowledge about the environment in which business enterprises are working.



Business Enterprises and Their Environment

External Environment	Ingredients	Explanation	Influence on accounting
Economic	i) Capital	Machinery, buildings, Inventories, Equipment, tools of all kinds and cash	(i) Make or buy decision (ii) Availability and cost of capital funds
	ii) Labour	Availability, Quality and cost of labour	Capital intensive versus labour intensive process
	iii) Price level	Input price Output price	Inflation is an element of concern in using accounting techniques of preparation of financial statements and capital

			budgeting etc.
	iv) Government Fiscal and Tax Policies	Credit control Tax policy : <ul style="list-style-type: none"> • Rate of tax • Exemption • Investment Rebates • Holidays 	In generating information for decision making an accountant take all these issues into account.
	v) Customers	Demand of goods and services Expectations of the society Attitudes, beliefs, culture Existence of substitutes	Accountants must also consider the beliefs and behavioral pattern of customers
Technological [Sum total of the knowledge - we have to do things]	Impact of technology : <ul style="list-style-type: none"> • New product • New machine • New tools • New materials • New service 	<ul style="list-style-type: none"> • Greater productivity • Higher standard of living • More leisure time • Greater variety of products • Technological changes • Increased ability to master time and distance • Increased ability to greater store and distribute energy • Increased ability to design new materials • Automation of physical processes • Automation of some mental processes • Extension of the human ability of sense things. • Increased ability to understand group behavior 	Accountants' responsibilities to help selecting the best technology for replacing the traditional technology. Moreover, new technology increases the ability of the accountants also.
Social	Attitudes, Desires, Expectations, Degrees of intelligence and	Industrialists are corrupt; dishonest, Absence of mutual respect	

	education, Beliefs and customs of people	Respect to the rich but not knowledge Regionalism Political and Religious hatred [In Bangladesh]	
Political and Legal	Political : Philosophy of political parties	Promoting business <ul style="list-style-type: none"> • by stimulating micro enterprises • subsidising selected industries • Tax exemptions • supporting research and development • Protection 	
	Legal : Laws and Regulations	<ul style="list-style-type: none"> • Protection given to employees, customers and community • Protection of ecology 	Accountants should also have clear ideas about the prevailing laws of the countries because, they must work within the boundaries of laws.
Ethics [the discipline dealing with what is good and bad and with moral duty and obligation]	Personal Ethics : Rules governing individual life Accounting Ethics: Code of professional conduct Business Ethics : Truth and Justice	Utilitarian theory : Greatest good for greatest number of people. Theory based on rights : All people have basic rights Theory of justice : Decision makers be guided by fairness and equity as well as impartiality.	Accountants must observe their professional ethics at the time of performing and at the same time consider other ethical theories also.

Economic System:

One of the important elements of business environment is the economic systems of the countries concerned. Two extreme systems are (i) capitalism and (ii) planned socialism. There may be others in between these two extremes. After the fall of USSR believer of planned.

Types Elements	Capitalism	Market Socialism	Planned Socialism
Decision making Structure	Primarily decentralized	Primarily decentralized	Primarily centralized

Mechanism for information and coordination	Primarily market	Primarily market	Primarily planned
Property rights	Primarily private ownership	State and / or collective ownership	Primarily state ownership
Incentives	Primarily material	Material and moral	Material and moral

[Ref.: Gregory and Stuart, Comparative Economic System]

Socialism, in one extreme the USA is the follower and promoter of capitalism, and in the other China is following market socialism. The UK, Canada, Australia, are considered as welfare state in the capitalistic block. When we are in the capitalistic block we are to assume the following : (i) Decentralized Decision making

- (ii) Market efficiency
- (iii) Private ownership and
- (iv) Material incentives

Management accountants' role differs in different economic systems. After the break of USSR, Russia had to hire accounting experts from the USA and Canada to train their accountants to handle the new economic system and also to modify the university academic programs. This means that accountants should also take into account the economic system of the country in which their enterprises are dealing.

The Globe:

Today, we believe in one economic system. The world has become small - happenings in one country affect the affairs of other countries. The eleventh September incidence in the WTC building has affected the economy of each and every country. On the other hand, there are regional and international bodies to influence the economic activities of certain regions. These bodies sometimes make attempts to influence the accounting techniques and practices. As a practicing accountant, a management accountant must know and follow the prescriptions developed by those regional and international bodies. Some of those bodies controlling accounting practices are:

Regional and International bodies	Corresponding accounting association	Issues
European Economic Community (EEC)	Union of European Accountants (51)	Harmonization of accounting practices
Association of South East Asian Nations [ASEAN]	Asean Federation of Accountants [AFA'77]	Standardization of accounting practices
-	Confederation of Asian and Pacific Accountants [CAPA '77]	Do
South Asian Association of Regional Cooperation	South Asian Federation of Accountants	Standardization of accounting practices

[SAARC]	(SAFA'84)	
Organization for Economic Corporation & Development (OECD)	-	Capital Budgeting Technique : Little & Mirrlees Model
United Nations Industrial Development Organization (UNIDO)	-	Capital Budgeting Technique : Sen & Dasgupta Model
The World Bank	-	Standardization of Accounting practices

The Evolution of Management Thoughts and its accounting implications:

The development of management thought dates back to the days when people first attempted to accomplish goals by working together in groups. As accounting supplies information to management, the nature of information is also influenced by the management theory. Therefore, a brief description of management theories will help accountants to know better their roles in decision making.

<u>Contributors</u>	<u>Theories</u>	<u>Accounting implications</u>
1. Frederick Winslow Taylor [1856-1912)	<u>To increase productivity</u> Through greater efficiency in production and increased pay for workers Through the application of the scientific methods [Use of science, group harmony and cooperation, achieving maximum output and developing workers.]	Measures of productivity Impact of increased pay on output Individual versus group incentives
2. Henry L. Gantt [1861-1919]	Scientific selection of workers Harmonious cooperation between workers and management Use of PERT Gantt chart	Use Gantt chart Use of PERT
3. Frank B. Gilbreth [1868-1924]	Time study and Motion study Human aspect of work Workers personalities and needs	- Target time fixation - Determination of best motion - Determination of workers' needs
Modern Management 1. Henry Fayol	i) Division of work, ii) Authority and Responsibility, iii) Discipline, iv) Unity of	- Fair salary - Turnover - Goal determination

command, v) Unity of direction vi)	- Benefits of division of labour
Subordination to general interest vii) Fair remuneration viii)	- planning, organizing, commanding, coordinating and controlling
Centralization ix) Scalar chain x) Order xi)	
Equity xii) Stability of tenure xiii) Initiative ,	
xiv) Union is strenght	

Multi-disciplinary approaches to management:

During nineteenth century and early part of twentieth century, many scholars and practitioners were thinking about using theories developed in other discipline in management. Following are some of the theories used in management:

1. Industrial Psychology
2. Sociological Approach to management
3. Social systems theory

1. Industrial Psychology:

***Hugo Munsterberg* [1863-1916]**

His contributions are :

- (a) to find people whose mental qualities best fit them for the work they are to do,
- (b) to identify the psychological conditions for the greatest and most satisfactory output which can be obtained from the work of every person;
- (c) to find ways to obtain the best possible results from workers

2. Sociological Approach to management:

Max Weber : Hierarchy, authority and bureaucracy lie at the foundation of all social organizations.

Emile Durkheim : [1893]

Groups by establishing their values and norms, control human conduct in any social organization.

Vilfredo Pareto : [1896-1917]

Social attitudes or sentiments, function to cause the system to seek an equilibrium when disturbed by outside and inside influence.

The Hawthorne Studies:

Elton Mayo [1880-1949]

The improvement in productivity was due to such social factors as

morale, satisfactory interrelationships between members of a work group ("a sense of belonging") and effective management - a kind of managing that would understand human behavior, especially group behavior and serve it through such interpersonal skills as motivating, counselling, leading and communicating."

Social Systems Theory:

Chester Barnard : [1886-1961]

The tasks of executives are to maintain a system of cooperative effort in a formal organization [reasons for and the nature of cooperative systems].

Recent Developments:

During the second part of the twentieth century, there were tremendous change in manufacturing processes and at the same time management philosophers also contributed in the development of management theories. These developments and changes have direct implications on accounting systems and practices. In some cases, accounting experts had to develop new techniques to handle the changed environment. Some of the prominent changes are mentioned below :

Management Philosophy:

- i) Peter F. Drucker : Management by objectives/Management by Results.
- ii) W. Edwards Deeming : Total Quality Management
- iii) Theory of Constraints (iv) Management by exception, (v) Just-in-time management (vi) Agency theory (vii) Value-chain (viii) Process Re-engineering (ix) Contingency theory (x) Total Employee Improvement

Management by objectives/Management by Results:

Management by objectives is a comprehensive managerial system that integrates many key managerial activities in a systematic manner and that is continuously directed toward the effective and efficient achievement of organizational and individual objectives. An MBO system has the following elements:

- (i) Emphasis on performance appraisal:

Performance is evaluated against the present objectives. It encourages self evaluation by lower level executives.

- (ii) Emphasis on short-term objectives and motivation:

Individual goal setting by employees has motivation implications. Short term objectives are relatively more specific. Important factor, here are "incentive"; "participation" and "autonomy".

- (iii) Inclusion of Long-Range Planning :

Emphasis too much on short-term objectives may result in "undesirable

Management by objectives is a comprehensive managerial system that integrates many key managerial activities in a systematic manner and that is directed toward organizational and individual objectives.

managerial behavior like-over production, less importance on maintenance and research, poor customer relation etc. Therefore, long-range and strategic planning should also be included in MBO.

(iv) The Systems Approach :

MBO integrates several managerial subsystems like (a) design of organizational structure, (b) portfolio management, (c) management development, (d) career development, (e) compensation programs and (f) budgeting. To be effective MBO has to be viewed as a comprehensive system.

Total Quality Management (TQM)

The most popular approach to continuous improvement is known as total quality management. TQM is "a management approach of an organization, centered on quality, based on the participation of all of its members and aiming at long term success through customer satisfaction, and benefits to all members of the organization and to the society." Thus TQM has three important tenets :

- (i) It necessitates an internal managerial system of planning, controlling and decision-making for continuous improvement.
- (ii) It requires participation by everyone in the organization.
- (iii) It focuses on improving goods and services from the customers point of view.

According to Crosby (1988) TQM is based on the participation of all members of an organization in improving processes, products, services and the culture in which they work.

Perhaps the most important and pervasive TQM problem-solving tool is the plan-do-check-act cycle, which is referred as "Deming Wheel." PDCA cycle is a systematic, fact-based approach to continuous improvement.

Amounts spent on improved production equipment, training and engineering and product modelling are considered preventive costs.

'A company can improve its product and service quality by investing in prevention costs, which prevent product defects that result from dysfunctional processing. Amounts spent on improved production equipment, training and engineering and product modelling are considered preventive costs. Complementary to these costs are appraisal costs, which represent costs incurred for monitoring and compensate for mistakes not eliminated by preventive measures. Both these costs will cause a reduction in failure costs. These costs represent internal losses such as scrap and rework and external losses such as warranty work, customer complaint departments, litigation, or defective product recalls.'

Cost of Compliance		Cost of non-compliance	
Preventive costs	Appraisal Costs	Internal failure costs	External failure costs
Employee	Before Production	Product	Organization
• Hiring for quality	• Receiving	• Reworking	• Staffing complaint

<ul style="list-style-type: none"> • Providing training and awareness • Establishing participation programs <p>Customers</p> <ul style="list-style-type: none"> • Surveying needs • Researching needs • Conducting field trails <p>Machinery</p> <ul style="list-style-type: none"> • Designing to detect defects • Arranging for efficient flow • Arranging for monitoring • Incurring preventive maintenance • Testing & adjusting equipment • Fitting machinery for mistake proof operations <p>Suppliers</p> <ul style="list-style-type: none"> • Arranging for quality • Educating suppliers • Involving suppliers <p>Product Design</p> <ul style="list-style-type: none"> • Developing specification • Engineering & modeling • Testing and adjusting for conformity 	<p>Inspection</p> <p>Production Process</p> <ul style="list-style-type: none"> • Monitoring and inspection • Keeping the process consistent, stable and reliable • Using procedure verification • Automating <p>During & after production</p> <ul style="list-style-type: none"> • Conducting quality audits <p>Information Process</p> <ul style="list-style-type: none"> • Recording and reporting defects • Measuring performance <p>Organization</p> <ul style="list-style-type: none"> • Administrating quality control department 	<ul style="list-style-type: none"> • Having waste • Storing and disposing waste • Reinspecting rework <p>Production Process</p> <ul style="list-style-type: none"> • Reprocessing • Having unscheduled interruptions • Experiencing unplanned downtime 	<p>departments</p> <ul style="list-style-type: none"> • Staffing warranty claims department <p>Customer</p> <ul style="list-style-type: none"> • Losing future sales • Losing Reputation • Losing goodwill <p>Product</p> <ul style="list-style-type: none"> • Repairing • Replacing • Reimbursing • Recalling • Handling litigation <p>Service</p> <ul style="list-style-type: none"> • Providing unplanned service • Expediting • Service after purchase
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Ref : Barfield, Raiborn & Kinner : Cost Accounting.

Theory of Constraints (TOC)

A constraint is anything which prevents from performing/doing to maximize profit / production or minimizing cost. Where there are constraints, the success of the organization depends on the effective management of these constraints. It should be accepted that we have enough of wants to be satisfied with scarce resources. These scarce resources are also constraints. For improving performance attempts must be made to handle constraints. Handling of constraints may include :

(i) Constraining factors may be used to contribute maximum to the profitability of the enterprise.

(ii) Diverting resources to relax the constraints.

When there is one constraint, it is easy to handle, but presence of more than one constraint will complicate the situation. In that situation, sophisticated techniques like linear programming may be used.

Management by Exception (MBE)

Management by exception is "a phrase used in connection with presumed actions required where reports on performance differ from original projections.

Management by exception is "a phrase used in connection with presumed actions required where reports on performance differ from original projections (actual costs users standard costs or budgeting prescriptions). Characteristically, these reports bring out favorable and unfavorable variances, the later being the basis for management by exception." If the foregoing Kohler's concept of MBE is explained it is advisable to investigate the causes of unfavourable variances to take corrective actions. But there are other thinkers according to whom MBE is concerned with dealing only with what significantly different from the norm. Management's time and energy must be used to deal with "exceptional" "significant" and "controllable" situations. In every situation, costs must be compared with the expected benefits.

In words of Charles T. Horngren "MBE concentrates on areas that deviate from plans and ignoring areas that are presumed to be running smoothly. Control should not be a straight jacket."

Systems Theory:

System theory is the product of the realization of the interaction between the structural (mechanistic) and human (behavioral) dimensions of organization and the influence of external forces. According to this approach, an organization is considered as "a system composed of subunits or subsystems that are continually interact with and mutually dependent on one another." This means that actions that occur within one part of the system not only affect that part but can have a "ripple effect" through other subsystem of the organization.

System theory says that "things do not happen, but rather theory evolve from multiple pressure and can entail multiple outcomes."

Organizations are composed of at least, the following components:

(i) A task/technological subsystem : It consists of (a) basic works to be done; (b) specific work activities and technologies that enable that work to be accomplished.

(ii) An administrative / Structural subsystem (formal organization): It includes the following : (a) task grouping, (b) work rules and policies; (c) authority systems (relationship, power bases, control procedures). (d) job design and (e) the physical environment.

(iii) A subsystem of individuals: Components of this subsystem are : (a) people who perform, (b) their knowledge, skill, attitudes, values, expectation and perceptions.

(iv) An emergent subsystem: (Informal) It develops overtime as people interact within formal system. It includes (a) unwritten norms, (b) intra organizational statuses (c) competition and cooperation between groups and (d) other non-programme activities and interactions.

Contingency Theory:

This theory is considered as an outgrowth of systems theory. The central thesis of contingency theory is that:

"there is no universal principles of management that can be applied uncritically in all situations. Organization and management approaches must vary from one firm to the next because it depends on the unique environment conditions and internal factors which are inherent to each organization. Thus, a situational approach to decisions about organizational structure and appropriate managerial behaviors is necessary."

**Variations in emphases Contingency
School of thoughts**

Open systems Planning	Formal Design organization	Leadership style and Behavior
"there is no one best solution for all organizations since each firm has to cope with its own unique set of technical, human, and market inputs."	(i) For relatively predictable markets with simple and repetitive technologies the more formal and pyramidal organization structure. (ii) For uncertain environment with complex technologies, a more flatter or matrix form of organization.	Leadership style should vary according to such factors as (i) nature of leader-member relations; (ii) degree of task structure, (iii) the power of a leader, (iv) the expertise and willingness of subordinates

Agency Theory

"An agency relationship is a contract under which one or more principal engage another person as their steward (agent) to perform some service on their behalf, the performance of which requires the delegation of some decision making authority to the steward." Managers have always been the agents of company shareholders.

If both parties to the agency relationship are assumed to attempt to maximize their self-interests and if the monitoring of performance is not costless then a good reason exists to believe that the agent will not always act in the best interest of the principal.

Just-in-Time-Systems (JIT)

'JIT is a philosophy about when to do something. The 'when' is as needed and the 'something' is a production, purchasing, or delivery activity. The JIT philosophy is applicable to all departments of all types of organizations. As identified by Barfield, Rainborn and Kinney, JIT has the following three primary goals :

1. Elimination of any production process or operation that does not add

value to the product / service.

2. Continuous improvement in production / performance efficiency, and
3. Reduction in the total cost of production / performance while increasing quality.

JIT manufacturing, originating in Japan where a card or 'Kanban' (pronounced as Kahnbahn) was used to indicate a work center's need for additional components. A just-in-time manufacturing system attempts to acquire components and produce inventory units only as they are needed, minimize product defects and reduce cycle/setup times for acquisition and production.

Benefits of a JIT System:

The main benefits of JIT are the following:

- (i) Working capital is swelled out by the recovery of funds that were tied up in inventories.
- (ii) Areas previously used to store inventories are made available for other, more productive uses.
- (iii) Throughput time is reduced, resulting in greater potential output and quicker response to customers.
- (iv) Defect rates are reduced, resulting in less waste and greater customer satisfaction.

Elements of a JIT Philosophy

The elements of a Just-in-Time philosophy are:

- a. Quality is essential at all times: work to eliminate defects and scrap.
- b. Employees often have the best knowledge of ways to improve operations: listen to them,
- c. Employees generally have more talents than are being used; train them to be multi-skilled and increase their productivity.
- d. Ways to improve operations are always available; constantly look for them, being certain to make fundamental changes rather than superficial ones.
- e. Creative thinking does not cost anything; use it find ways to reduce costs before making expenditures for additional resources.
- f. Suppliers are essential to operations; establish and cultivate good relationships with suppliers and use, if possible, long-term contracts.
- g. Inventory is an asset that generates no revenue while it is held in stock. Thus, it can be viewed as a 'liability'; eliminate it to the extent possible.
- h. Storage space is directly related to inventories; eliminate it in response

to the elimination of inventories.

i. Long cycle times cause inventory buildup; keep cycle times as short as possible by using frequent deliveries.

Value - Chain:

C.T. Horngren explains the Value-chain as "the set of business functions that add value to the products or services of an organization." Functions in the value chain are:

(i) Research Development: the generation of, and experiment with, ideas related to new products, services, or processes.

(ii) Design of products, services or process: the detail and engineering of products.

(iii) Production: the coordination and assembly of resources to produce a product or deliver a service.

(iv) Marketing: the manner by which individuals or groups learn about the value and features of products or services.

(v) Distribution: the mechanism by which a company delivers products or services to the customers.

(vi) Customers Service: the support activities provided to the customer.

Process Reengineering: [Garrison & Noreen]

In process reengineering, a business process is diagrammed in detail, questioned and then completely redesigned in order to eliminate unnecessary steps to reduce opportunities for errors and to reduce costs. A business process is a series of steps that are followed in order to carry out some task in a business.

Process reengineering focuses on (i) simplification and elimination of wasted efforts. A central idea of process reengineering is that all activities that do not add value to a product or service that customers are willing to pay for are known as non-value-added activities and non-value activities must be dropped.

Total Employee Involvement

Over the last six/seven decades, much work has been done in this field with same results. The theory is if someone is involved in decision making, and controlling his or her own sphere of influence and so on, he or she will feel much more responsive towards colleagues and systems, consequently employees who participate are happier, and more productive employees.

Current Trends

According to C.T. Horngren, the following factors are causing changes in management accounting :

(i) Shift from a manufacturing-based to a service-based economy, [Cost tractability]

(ii) Increased global competition [More accurate and timely information]

(iii) Advances in technology : [Use of computer influence data processing by accountants)

Accounting Implications of recent developments in management philosophy

Recent Developments	Important Issues	Accounting Implications
MBO (Management by objectives)	<ul style="list-style-type: none"> i) Long-range planning ii) Short term objectives iii) Performance appraisal iv) Systems approach 	<ul style="list-style-type: none"> i) Setting long term goals and short term objectives ii) Planning and Budgeting iii) Variance analysis iv) Remedial steps
TQM (Total Quality Management)	<ul style="list-style-type: none"> i) Planning and controlling for continuous improvements ii) Participation of all in the organization iii) Improvement of goods and services from customers point of view 	<ul style="list-style-type: none"> i) Assurance of participation in the decision making process, e.g. target setting ii) Determination of total cost of quality iii) Use of concept of cost management
TOC (Theory of Constraints)	Recognition of Constraints in a situation	Use of Linear Programming to find out the optimal solution
MBE (Management by Exception)	Identification of causes of variances	<ul style="list-style-type: none"> i) Measurement of variances ii) Decision of variance investigation on the basis of cost-benefit analysis.
Systems theory	<ul style="list-style-type: none"> i) A task / Technological subsystem ii) An Administrative / Structural subsystem iii) An Emergent Subsystem 	<ul style="list-style-type: none"> i) Selection of appropriate technology ii) Authority relationship and information need iii) Recognition of informal relationship
Contingency Theory	Situational approach to decision and appropriate managerial behavior	Behavioral accounting
Agency Theory	Agents may not always work for the benefits of principals.	<ul style="list-style-type: none"> i) Recognition of conflict of goals ii) Selecting alternative for goal congruence
Just-in-time Philosophy	Inventory is an evil	<ul style="list-style-type: none"> 1) Reduction of Inventory as far as possible 2) Long Term contract with suppliers 3) Change in variance analysis techniques 4) Reduction in throughput time
Value-added Management i.e.	Business functions that add	Determination of value of each

value chain	value to the products or service	function
Process Reengineering	i) Elimination of unnecessary steps	Identification of non-value added functions Reduction of cost
Total Employee Involvement		Ensuring participation

Key Terms

Management : Process of designing and maintaining an environment in which individuals working together in groups, efficiently accomplish selected aims.

Strategic management : Strategic management involves (i) performing environmental analyses, (ii) establishing organizational directions, (iii) formulating organizational strategies (iv) implementing organizational strategies and (v) exercising organizational control.

Strategy : A set of goals and their action plans for a particular organization level.

Action plan : A description of the means by which activity is expected to be directed toward striving for specified objectives and targets.

Planning : It involves selecting missions and objectives and the actions to achieve them.

Policies : Understandings that guide or channel thinking in decision making.

Procedures : Plans that establish a required method of handling future activities. They are chronological sequences of required actions.

Rules : Specific required actions or non-actions, allowing as discretion.

Programs : Programs are a complex of goals, policies, procedures, rules, task assignments, steps to be taken, resources to be employed, and other elements necessary to carry out a given course of actions.

Budget : A budget is a statement of expected results expressed in numerical terms.

Environment : It refers to surroundings and other constraints within which one performs. Components of business environments are (i) Economic (ii) Ethical, (iii) Political & Legal, (iv) Social and (v) Technological.

Organizing :	Providing resources needed to carryout assigned responsibilities.
Controlling :	Assuring the effective and efficient use of scare resources in the fulfillment of organizations goal.
Directing :	Commanding and motivating people to act in accordance with the decided manners.
Motivating :	Motivation is the "will to do'. It depends on certain motives like needs, wants, drives or impulses. Motivating is to inculcate the will to do.
EEC :	European Economic Community
ASEAN :	Association of South East Asian Nations
SAARC :	South Asian Association of Regional Cooperation
OECD :	Organization for Economic Cooperation and Development
UNIDO :	United Nations Industrial Development Organization
Scientific Management :	Increase of productivity through the use of scientific methods and through greater efficiency in production and increased pay to workers.
PERT :	Project Evaluation and Review Technique
Gantt Chart :	A bar chart developed by Henry G. Gantt in early twentieth century to show the time relationship of various events of an activity.
Howthorne Studies :	Elton Mayo showed that the improvement in productivity was due to such social factors as morale, satisfactory interrelationships and effective management [1880-1949).
Social Systems Theory :	Chester Barnard [1886-1961] claimed that the tasks of executives are to maintain a system of cooperative effort in a formal organization.
MBO/MBR:	Management by objective / Management by Result is a comprehensive management system that integrates many key managerial activities in a systematic manner and that is continuously directed toward the effective and efficient achievement of organizational and individual objectives.
TOC : Theory of constraint :	The success of an organization depends on the effective management of constraints.

- MBE : Management by Exception :** A phrase used in connection with presumed actions required where reports on performance differ from original projections.
- Systems Theory :** Interaction between the structural and human dimensions of organization and the influence of external forces.
- Contingency Theory :** Organization and management approaches must vary from one firm to the next because it depends on the unique environmental conditions and internal factors which are inclement to each organization.
- Agency Theory :** Agent will not always act in the best interest of the principal.
- JIT :** Just-in-time
- Value-Chain :** The set of business functions that add value to the product or services of an organization.
- Process Reengineering :** All activities that do not add to value to a product or a service that customers are willing to pay for should be eliminated.
- Total Employee Involvement :** If someone is involved in decision making, and controlling his/her own sphere of influence and so on he or she will feel much more responsive towards colleagues and system.
- Total Quality Management (TQM) :** A management approach of an organization centered around quality, based on the participation of all and aiming at long term success through customers satisfaction and benefits to all members.
- Quality :** Quality means conformance to requirements. According to Deming, quality is a product or services nature or features that reflect capacity to satisfy expressed or implied statements of need.
- PDCA :** Plan-Do-Check-Act cycle is a systematic, fact-based approach to continuous improvement.
- Deming Wheel :** PDCA : Plan - Do - Check - Act Cycle.

PRACTICE TEST

A. Self-Assessment Questions (SAQs)

True - False

1. Indicate true or false statements by using "T" or "F" respectively.
 - a. Management tools and processes to be effective must be adjusted to its external environment.
 - b. Management accountants hold line positions within their own departments.
 - c. Setting standards is an organising activity.
 - d. Communicating budget from top to bottom is a part of controlling.
 - e. In a market economy [Capitalism] incentives are mainly moral.
 - f. In planned economic system, decision making structure is decentralized.
 - g. In market socialism, individual property rights are allowed.
 - h. Little and Mirrlees model is used by the United Nations Industrial Development Organization.
 - i. Federick Winslow Taylor was the proposer of the use of the PERT in management
 - j. Henry Fayol suggested fourteen principles of management.
 - k. The Hawthorne Studies resulted in the recognition of social factors as morale, belongings as a contributor to improvement
 - l. F.W. Taylor used the concept of management by objectives.
 - m. Participation by everyone in the organization is one of the tenets of TQM.
 - n. TQM focuses on Quality from the customers point of view.
 - o. PDCA is a tool of TQM.
 - p. In determining cost of quality. Cost of non-compliance can be grouped as preventive costs and inspection costs.
 - q. Cost of storing and disposing waste is an element of external failure cost.
 - r. One of the benefits of JIT is the reduction of working capital requirement.

- s. A management accountant has nothing to do with systems theory application.
- t. An agent will always act in the interest of the principal.

B. Short Questions:

1. What is management? How does it differ from 'Strategic Management'?
2. (a) Differentiate between offensive and defensive posture.
(b) Relate between Goal Levels and Organizational Entities.
3. What are management strategic responsibilities?
4. Explain the role of an accountant in the planning and control cycle.
5. Explain the implications of environment on accounting.
6. Do you think the role of accountants will be different under different economic systems?
7. Discuss the accounting implications of various management thoughts.
8. What is total quality management? What will be the role of an accountant under a TQM environment?
9. Explain (a) TOC (b) MBE (c) MBO
10. What is JIT? What are its benefits?

Answer to SAQs:

1. (a) T; (b) T; (c) F; (d) T; (e) F; (f) F; (g) F; (h) F; (i) F; (j) F; (k) F; (l) T; (m) T; (n) F; (o) T; (p) T; (q) T; (r) F; (s) F; (t) T; (u) F; (v) F.

Lesson 2: Accounting and its Branches

Learning Objectives

After completing this lesson, you are expected to be able to:

- Explain the meaning of accounting.
- Identify the users and the uses of accounting.
- Explain the various branches of accounting.
- Compare "Financial Accounting" and "Management Accounting".
- Compare "Management Accounting" and "Cost Accounting".
- Compare the terms - "Cost Control", "Cost Reduction" and "Cost Management".

Introduction

The term 'accounting' is explained by different individuals differently basing on their experiences in using accounting information.

Weygandt & Kieso :

'Accounting is the process of identifying, measuring, recording and communicating the economic events of an organization (business or non-business) to interested users of the information.'

Meigs & Meigs, Bettner, Whittington :

'Accounting is simply the means by which we measure and describe the results of economic activities. It is often called the language of business because it is so widely used in describing all types of business activities.'

E.L. Kohler

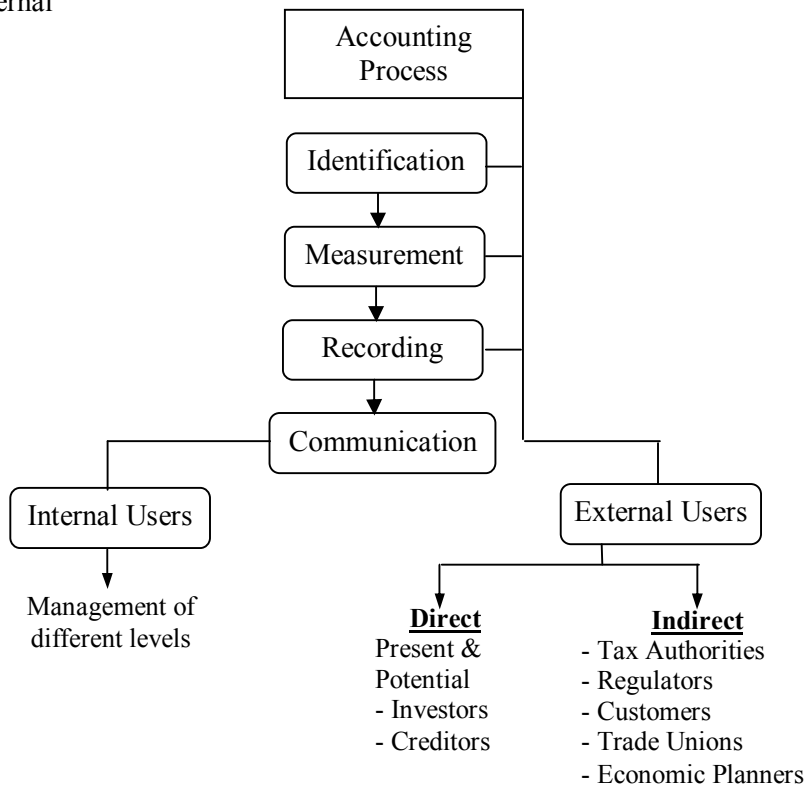
'Accounting is the recording and reporting of transaction.'

If the above definitions are explained deeply, we will arrive at a conclusion that accounting is nothing but a measuring and communicating device. Here we are getting two terms "measuring" and "communicating". Measurement refers to assignment of numbers to objects. Here, objects are business transactions and events which have impact on the financial position of an entity. In the process of measuring the total impact of all the transactions and events that occurred during a particular period, it has to go through (i) identification of transactions and events, (ii) measuring the transactions and events, (iii) recording them in accounts and (iv) at the end of an accounting period summarising the results in the form of some financial statements like (i) Income Statement; (ii) Balance Sheet; (iii) Cash Flow Statement and (iv) All these statements are published for the use of interested parties. These financial statements are prepared to satisfy certain specific objectives. For example,

Title of the Statement	Purposes
Income Statement	To determine the amount of profit earned or loss incurred during an accounting period.
Balance Sheet	To determine the financial position of an entity on the last day of the accounting period.
Cash Flow Statement	To determine the viability of the entity by showing the causes of change in the cash balance.
Value Added Statement	To determine the amount and source of value added during a specified accounting period.

Users and Uses of Accounting Information:

Financial Statements are the media through which financial information is communicated to different users. The need of information depends on the nature of decisions, a specific decision maker. The differences in decisions divide the users in two broad groups - (i) Internal and (ii) External



Users	Uses
Management	(i) Planning (ii) Controlling (iii) Performance Evaluation. More specifically (a) Assessment of debt paying ability of the firm (b) Debt collectibility; (c) Cost of production, (d) Product profitability; (e) Availability of funds and (f) Performance attainment.
Investors	Return on Investment to decide whether to invest or not.
Creditors	Risks of granting credit
Tax Authorities	Compliance with law, Amount of tax
Customers	To know whether the business will continue or not
Trade Union	For better negotiation with the management
Economic Planners	To forecast economic activity.

Accounting Functions:

With the passing of time the scope of accounting has undergone a great change.

Accounting is considered to be a service-giving discipline. It supplies necessary information to satisfy the needs of the decision makers. With the passing of time the scope of accounting has undergone a great change. Development and use of new technology in business, addition of new management theories and development of people working as accountants have contributed to the expansion of accounting responsibilities. In brief, the responsibilities of accounts i.e. the functions of accounting are discussed below :

(i) Determination of "net income" or "net loss" and financial position:

One of the fore most functions of accounting is to determine the net result of business activities that took place during a particular period of time. This particular function is performed in accounting department by the preparation of either "Trading and Profit & Loss Account" or "Income Statement" for that period.

The result of business activities during a particular period will have a reflection on the financial position of a concern. It may improve the financial position by the addition of net income in a good year. In a bad year, the enterprise may eat up invested capital by incurring huge losses. Thus by preparing "Balance Sheet" on the last day, an accountant estimates the financial position of a concern. A comparison between the Balance Sheet at the beginning of a period and that at the end of the period will tell the changes in the financial position of the concern.

(ii) Determination of cost :

"Cost" is the sacrifice in terms of money or money's worth to acquire goods and services. This has a clean indication that to earn revenues an enterprise has to incur costs. As net income is the excess of revenue over costs, costs of producing goods sold or services rendered must be determined.

At the same time the cost of administering an enterprise and also the cost of selling and distribution should also be determined. This determination of cost is not limited to profit making concern only. Even for a non-profit organization, it is essential to determine costs of operation for determining the cost effectiveness of different alternatives of performing the job.

(iii) Control Functions

Today, the ability of accounting as a control device is well established. In a competitive economy, market controls business activities. Within the organization, accounting controls the operation for improvement. Through the budgetary control system, an organization tries to ensure the efficient use of all scarce resources like materials, labour and fixed facilities. In a partially controlled economy and also in case of a non-profit-making organization, it is accounting which controls the activities.

(iv) Attest Function:

In a large scale business, management is separated from owner. Management works as an agent of the owners, the principal. The principal, here, does not have any control over the activities of the organization. Management by the publication of annual financial statements claims what they performed during the financial year. What is the guarantee that the management's claims are true and fair? So, there must be some one who can pass opinion about the fairness of the published financial statements. In this situation it is the responsibility of the professional accountants i.e. Chartered Accountants in Bangladesh to pass opinion regarding the fairness of financial statements. It is generally accepted that Chartered Accountants' opinion adds credibility to the financial statements.

(v) Accounting in policy formulation:

Interested parties including government use accounting data for decision making. Government may want direct investments towards some sector basing decision on accounting data. Entire stock market operations are based on publicly available information included in the annual reports. In the USA corporations are required to publish quarterly cost information so that the market can decide on the efficiency of management.

Branches of accounting:

If we look into the various bodies of professional accounts in a country, we can observe that they are distinctively different. Even in Bangladesh there are four bodies of accountants recognized by the government. These are :

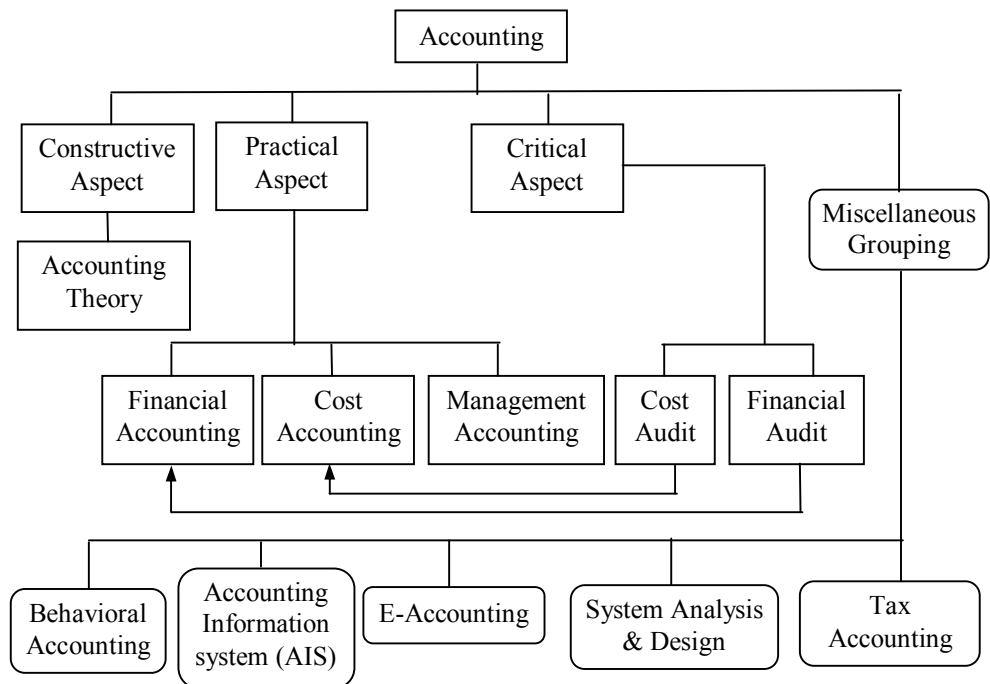
- (a) The Institute of Chartered Accountants of Bangladesh (ICAB)
- (b) The Institute of Cost and Management Accountants of Bangladesh (ICMAB)
- (c) The Institute of Chartered Secretaries
- (d) The Institute of Accounting Technicians

These institutes perform different responsibilities in different capacities. This transpires that there must be several district branches of accounting. For identifying various branches of accounting. Let us analyse the meaning of accounting given by Eric L. Kohler. According to him,

Accounting is:

1. The recording and reporting of transactions
2. Hence, by extension, the origins, recognitions, and disposition of transactions :
 - (a) their emergence (timing, quantification, often is physical unit, as well as money firms, classification);
 - (b) their processing (system design, internal check);
 - (c) their corroding and grouping (bookkeeping);
 - (d) their feedback (internal reporting);
 - (e) the continuous critical testing of transactions (internal auditing);
 - (f) the fitting of transaction groups into conventional patterns (summarization in financial statements);
 - (g) professional examinations of financial statements (audit by public accountants);
 - (h) periodic reporting to investors, government agencies, and public generally;
 - (i) transactions projection (budgeting and other forward-accounting activities);
 - (j) external reviews of and recommendations on organizational functioning (management services).

Although, Kohler's explanation as mentioned above specifies some of the functions that an accountant can perform, yet on the basis of functional specialization, various branches of accounting can be identified. The chart given below shows some of the branches of accounting :



Let us try to give a description of each branch of accounting below.

(i) Accounting Theory : This branch of accounting deals with the development of accounting principles, policies, standards and rules to be

followed by enterprises. Bodies parties involved in this area are (a) American Accounting Association (AAA), (b) Financial Accounting Standards Board (USA) (FASB), (c) International Accounting Standards Committee (IASC), (d) Accounting Standards Board (ISB); and various bodies of professional accountants like-The Institute of Chartered Accountants of Bangladesh (ICAB) and The Institute of Cost and Management Accountants of Bangladesh (ICMAB) and university teachers and researchers.

(ii) Financial Accounting: Kohler defines this branch of a accounting as "the accounting for revenues, expenses, assets and liabilities that is commonly carried on in the general offices of a business; a term often limited to the accounting concerned with published financial reports in contrast to internal aspects of accounting such as cost accounting.

(iii) Cost Accounting: This branch of accounting deals with "the classification, recording, allocation, summarization and reporting of current and prospective costs". It further includes design and operation of cost systems, procedure and method of determining cost by responsibility centres and controlling of costs.

(iv) Management Accounting:

The National Association of Accountants (NAA): It is that 'subset of accounting process which provides planning and control information to the firm or components thereof.'

Garrison & Noreen : 'Managerial accounting is concerned with providing information to managers—that is, people inside an organization who direct and control its operations. Because it is manager oriented, any study of managerial accounting must be preceded by some understanding of what managers do, the information managers need, and the general business environment."

(v) Financial Audit :

This audit "involves reviews of statements prepared by management or others as a prelude to expressing an opinion attesting to the fairness and adequacy of the representations of these statements contain or imply. This involves an exploratory, critical review by a professional accountant of the underlying internal controls and accounting records of a business enterprise or other economic unit, precedent to the expression by the auditor of an opinion of propriety (fairness) of its financial statements; often accompanied by a descriptive adjective or phrase indicating scope or purpose, e.g. annual audit, balance sheet audit, audit for credit purposes, cash audit."

(vi) Cost Audit : According to Montgomer a cost audit is an examination of the records and methods employed in determining the cost of goods manufactured and sold, with two-fold purpose of verifying the accuracy of the cost obtained and criticising the methods whereby they are developed'.

(vii) Miscellaneous branches of accounting : There are other areas of accounting having distinctive features. Some of these are- (a) Behavioral

Accounting; (b) Accounting Information System; (c) Tax Accounting; (d) System analysis and Design; and (e) E-Accounting.

Behavioral Accounting :

Kohler : It is “The attempt to identify psychological or sociological effects with reporting or accounting for enterprise activities.”

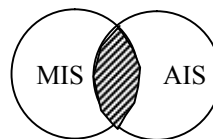
According to some behavioral accounting is the third major branch of accounting after financial and management accounting. Siegel *et al* explain behavioral accounting as concerned with human behavior and its relationship with the design, construction, and use of an efficient accounting information system. Behavioral accounting, by considering the relationship between human behavior and the accounting system, reflects the social dimension of an organization and becomes, thereby, a vital supplement to the financial information that accountings currently report." The scope of behavioral accounting can be broken into the following three categories :

- (a) The effect of human behavior on the design, construction, and use of accounting system;
- (b) The effect of the accounting system on human behavior; and
- (c) Methods to predict and strategies to change human behavior.

Accounting Information System (AIS) :

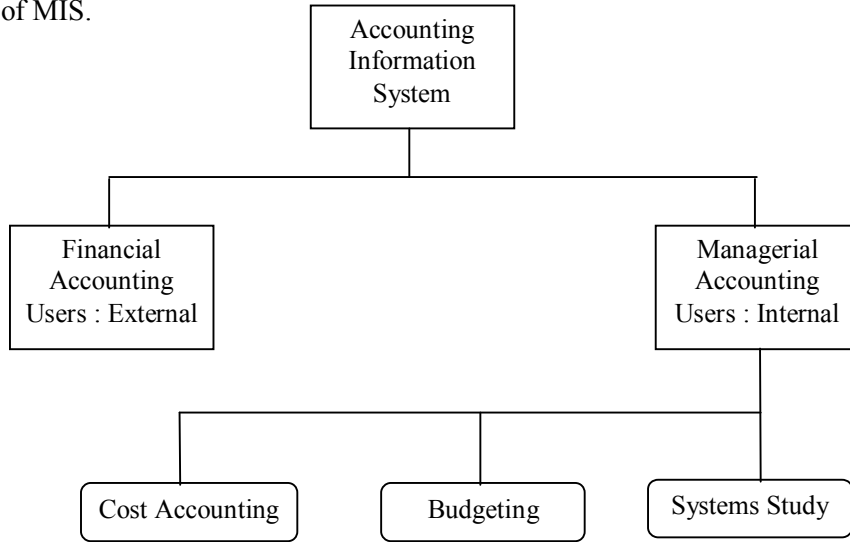
'AIS' includes three important words - (a) accounting; (b) information and (c) system. By this time, the reader has acquired sufficient understanding about accounting. The remaining two- system and information need clarification. A 'system is an entity consisting of interacting parts (subsystems) that attempts to achieve one or more goals.' "Information refers to data that have meaning to the recipient. The word "data" itself refers to facts or figures that have little, if any, meaning and therefore are not useful to the recipient's business decision making. Information on the other hand, refers to meaningful facts or figures useful for business decisions. An important function of a system is to efficiently convert the massive amount of available internal and external data to relevant information.' In the words of Moscovice *et al* : "AIS is an Organizational component that accumulates classifies, processes, analyses and communicates relevant financial oriented decision making information to a company's external parties (such as investors, creditors and tax agencies) and internal parties (principally management)."

MIS and AIS are separate as shown in the following figure and at the same time they to some extent are overlapping.



According to experts MIS's function is to supply information relevant to a manager's decision making. The economic information in an MIS is supplied by AIS. Financial accounting component of AIS is independent

of MIS.



Source: Moscové

Tax Accounting

It is a popular belief in Bangladesh that businessmen keep two sets of accounts- (a) one for own need and (b) the other for tax authorities. It is, most of the time, used sarcastically to mean that accounts are manipulated to cheat the tax authorities. But when financial accounting principles under the Taxation Laws are different from generally accepted accounting principles, accountants are required to prepare a different set of financial statements to meet the needs of tax authorities. So, there should be accounting experts who can prepare financial statements to suit the new of tax authorities. These statements are the products of tax accounting. Moreover, an enterprise has to plan its tax liabilities under existing laws.

System Design

The most practical aspect of accounting is the process through which business transactions are identified, measured, classified, recorded and summarized to prepare periodic statements. The entire process is sequential and is dependent on the nature of transactions and types and frequency of statements needed. Therefore, the accounting system should be designed in such a way that the transactions can be recorded properly and statements can be prepared timely and accurately. This designing part is very crucial and experts are needed to design appropriate accounting system for an enterprise. At present, "Accounting Package" such as "AcPack" and "Tally" are available. These computer accounting packages are to be adjusted for use in a particular concern. An accounting system should be such that the benefits derived from the system should be higher than the cost of installing and operating the system.

E-Accounting

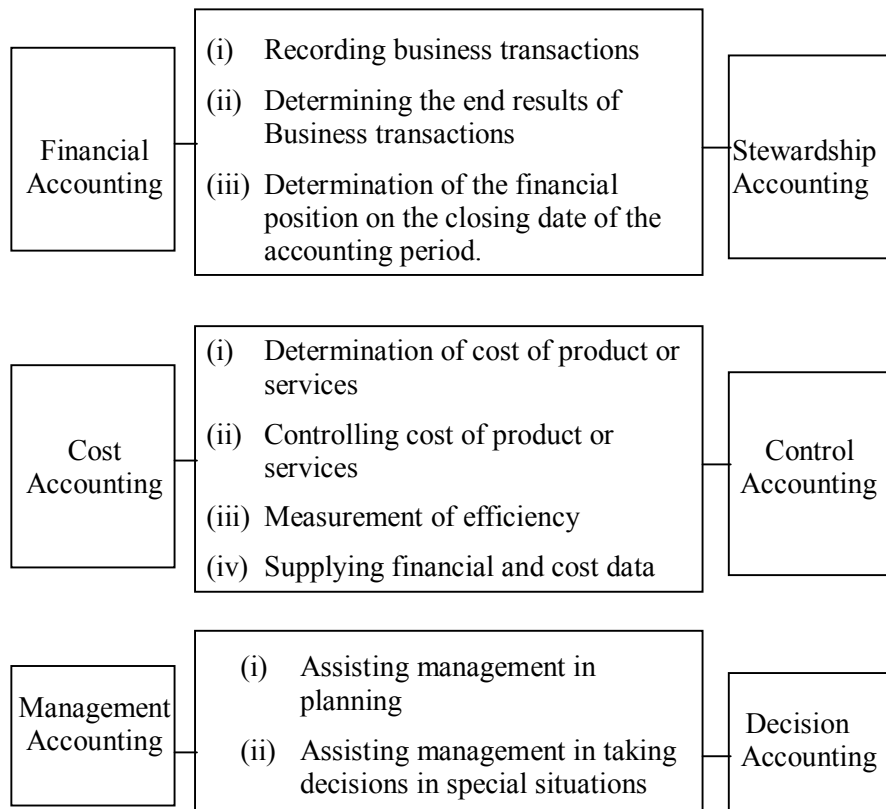
"Electronic commerce (e-commerce) is any business activity that uses the inter-net and World Wide. Web to engage in financial transactions."

During the present age of inter and intra net, the introduction of E-Commerce, E-Business, E-Banking has brought a new challenge for the accounting profession. "Electronic commerce (e-commerce) is any business activity that uses the inter-net and World Wide. Web to engage in financial transactions. Web site of manufactures and retailers world wide can be accessed by potential customers 24 hours a day. Businesses and consumers can view products and the way they work or fit together on computer or television screens. Customers can access product information and order and pay for their choices without picking up the telephone or leaving home a office. In the world of banking and financial institutions, bills can be paid, balances accessed, loans and insurance obtained and stocks traded." There are drawbacks to this system of operations. Still this system will continue to grow. This system has created a new area for accountants and accounting scholars to develop methods and techniques to suit the situation. Thus a new system of accounting i.e. E-Accounting is being developed gradually.

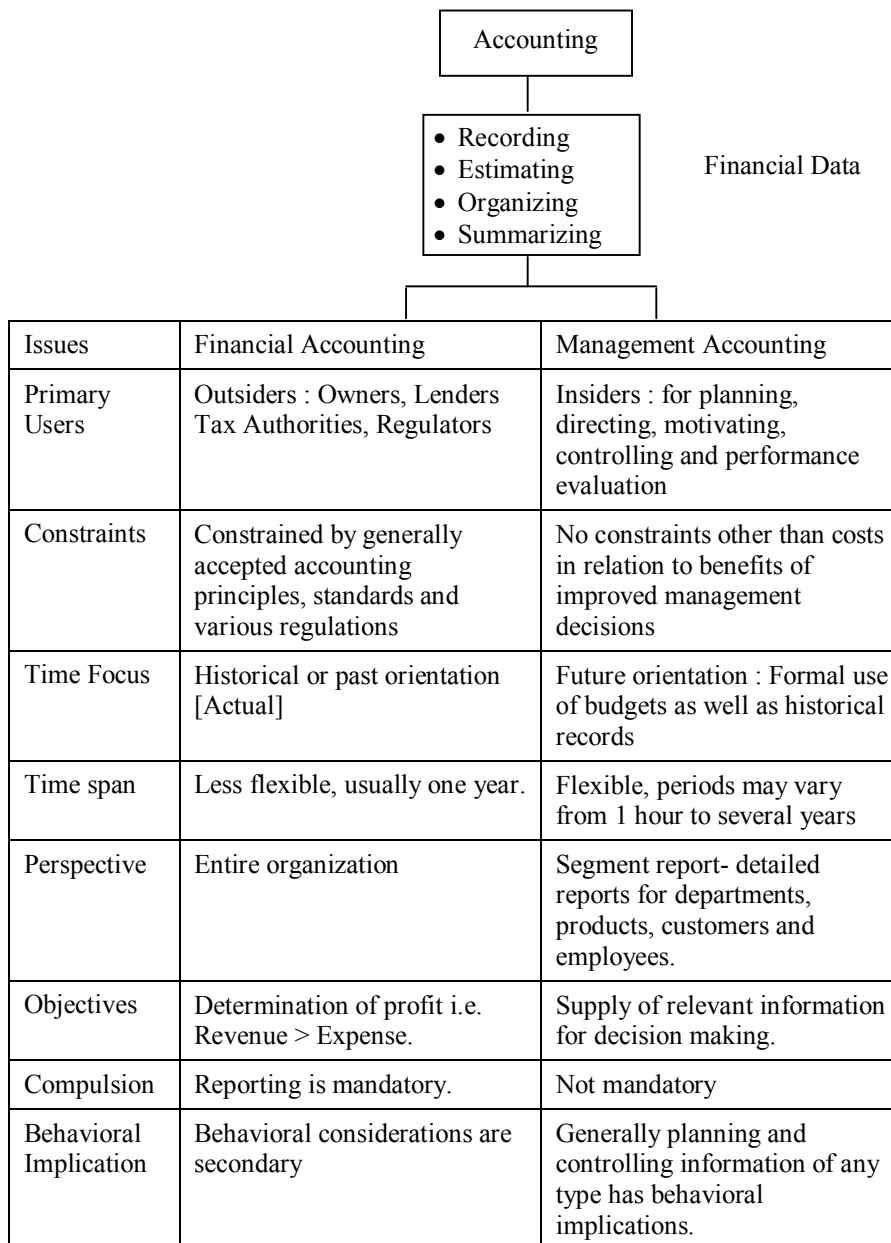
Financial Accounting, Cost Accounting and Management Accounting:

In the last section, practical area of accounting i.e. activities are classified as (i) Financial Accounting; (ii) Cost Accounting and (iii) Management Accounting. On this issue, there are differences among thinkers.

Thinkers who believe these categories explain the situation in the following way:



If we go through the history of development of accounting, it will be evident that the scope of accounting has increased gradually from stewardship accounting to control accounting and to decision accounting. At present there is a group specially the professionals which believe in two classes of practical accounting - (a) Financial Accounting and (b) Management Accounting. On this basis, accounting professionals are also grouped into two. These groups are termed as (a) Chartered Accountants (C.A) and (b) Management Accountants in the UK. In the USA they are known as (a) Certified Public Accountants (CPAs) and (b) Certified Management Accountants (CMAs. This group of thinkers differentiate between "Financial Accounting" and "Management Accounting" in the following way :



Quality of Information	Precise, Objective and Verifiable	Relevant, Flexible and Timely
Approach	Uni-disciplinary	Multi-disciplinary

Terms and concepts used in management accounting are under continuous change. In the last section a comparison between "Financial Accounting" and "Management Accounting" is given. Doubts may arise about the use of the term "Cost Accounting".

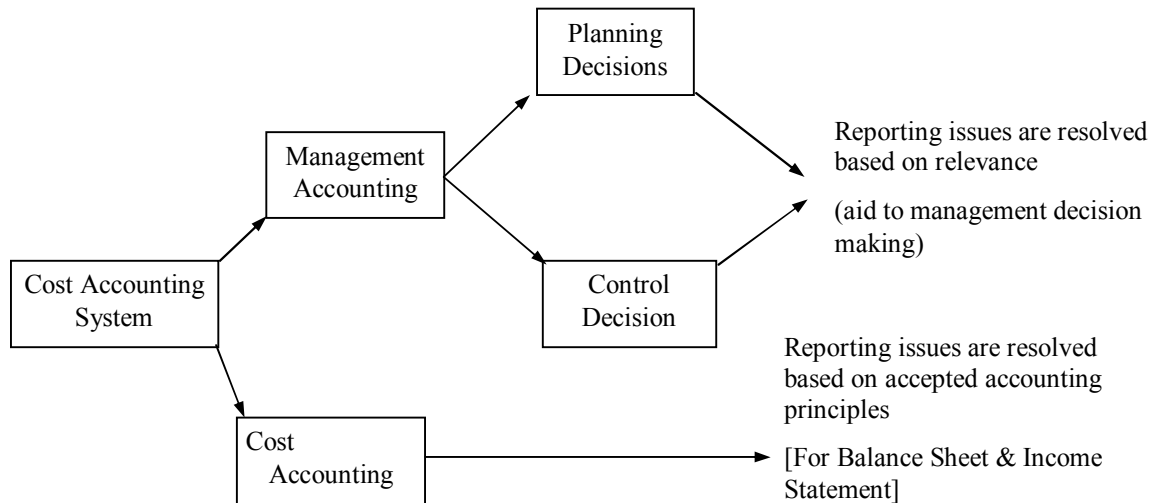
C.T. Horgren (1987):

'Cost accounting is management accounting plus a small part of financial accounting - to the extent that its product costing function satisfies the requisites of external reporting.'

C.T. Horgren (2000) :

'Cost accounting provides information for both management accounting and includes those parts of both management accounting and financial accounting Cost accounting includes those parts of both management accounting and financial accounting where cost information is collected or analyzed.

Jack Gray and Don Ricketts distinguish 'cost accounting' from 'management accounting' in the following way :



Comparison of "Management Accounting" and "Cost Accounting" :

It has already been shown in the above diagram the difference between these two branches of accounting. Although it may appear to be a repetition, yet we are going to have a further analysis to make the difference more clear to the reader.

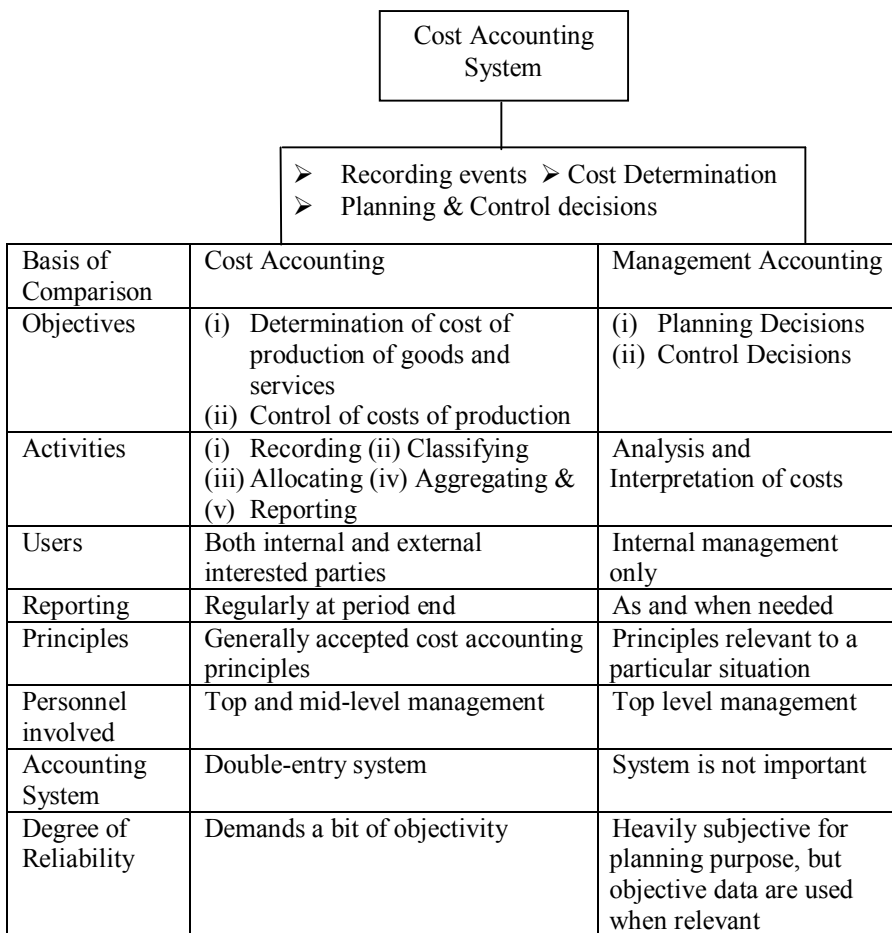
The National Association of Accountants (NAA) / The Institute of

Management Accountants (IMA) [USA] defines cost Accounting and Management Accounting as follows :

"Cost accounting as a systematic set of procedures for recording and reporting measurement of the cost of manufacturing goods and performing services, in the aggregate and in details. It includes methods of recognizing, classifying, allocating, aggregating and reporting such costs and comparing them with standard costs."

"Management accounting as that subset of accounting process which provides planning and control information to the firm or components thereof."

There is an issue of overlapping in these two definitions. There cannot be any control information without comparison between expected and actual.



Use of the terms- 'Financial Accounting'; 'Cost Accounting' and 'Management / Managerial Accounting' may create some doubt in the mind of readers. Introduction of these terms was needed to express the conception about some objects. It will be difficult to bring uniformity in use suddenly. These terms will continue to be used in the business world. In the USA, there are two boards- (i) Financial Accounting Standard

Board (FASB) for developing standards for financial accounting and (ii) Cost Accounting Standards Board for developing standards for cost accounting. At the same time, there are two institutes of accounting professionals - (i) The American Institute of Certified Public Accountants (AICPA) and (2) The Institute of Management Accountants. In Bangladesh we have two institutes : (a) The Institute of Chartered Accountants of Bangladesh and (b) The Institute of Cost and Management Accountants of Bangladesh.

"Cost Control", "Cost Reduction" and "Cost Management" :

In the field of management, these terms are used too frequently. Traditionally, "Cost Control" is considered to be the most important issue of management. Over the last one decade this importance has been shifting toward "Cost Management". Therefore, it is better to clarify these concepts.

Control is the process of assuring the efficient and effective use of scarce in business.

Control is the process of assuring the efficient and effective use of scarce in business. In doing so, management tries to keep happenings within some limits. Cost control also refers to the execution by management. The effectiveness of a control system depends on (a) how are standards set?, (b) how much motivated the employees are to fulfill standards? (c) how efficient is the evaluation system?

"Cost reduction" refers to the real and permanent reduction in the unit cost of goods manufactured or services rendered without reducing their value or impairing the quality.

In the U.S.A. cost of production figures are published quarterly to show the efficiency of management. Naturally, the reduction of cost of production from period to period is an indicator of management efficiency. Thus "Cost reduction" refers to the real and permanent reduction in the unit cost of goods manufactured or services rendered without reducing their value or impairing the quality. If we define cost reduction in this way, as objective of management cost reduction becomes more important than 'cost control'. But 'cost control' system can play an important role in reducing the cost of production.

It aims at providing same service at lower cost or better service at the same cost.

Over the last two decades or so another term-'Cost Management' has gained popularity. It has a wider connotations in comparison to the terms mentioned above. It aims at providing same service at lower cost or better service at the same cost. To achieve this objective every employee in the organization must be cost conscious. He/She must understand cost implication of his/her actions. This refers to the identification of waste, non-value added activities involved in the process of procurement, creation of goods and services and rendering services.

Key Words Used

- Accounting** : Recording and reporting of transactions
- Measurement** : Assigning number to objects
- Transactions** : Events having impact on financial positions.
- Income Statement** : Statement prepared to measure income earned or loss incurred during a financial year.
- Balance Sheet** : Statement prepared to measure financial position on a particular date.
- Cash Flow Statement** : Statement prepared to show the causes resulting in the change of cash balance over a period of time.
- Users of accounting information :**
- Internal** : Managers and Executives of the concern
- External** : Owners, bankers, customers, Employees, Government, Academicians, & Society.
- Management :**
- Discipline** : The process of designing and maintaining an environment in which individuals working together in groups, efficiently accomplish selected goals.
- Individual** : Head of an organization
- Executive Authority** : Combined fields of policy and administration.
- Management Control** : Process through which managers assure that scarce resources are procured and utilized most effectively and efficiently through people in the fulfillment of organizations goals.
- Planning** : Selecting missions and objectives and the actions to achieve them
- Controlling** : Measuring and correcting individuals and organizational performance to ensure that events conform to plans.
- Risk** : Variability of outcome, Standard Deviation is the measure of risk.
- Net Income** : Total Revenue earned during a period > Total Cost incurred to earn that revenue.
- Cost** : Sacrifice in terms of money or money's worth to acquire goods and services.
- Attestation** : Testimony about the fairness
- ICAB** : The Institute of Chartered Accountants of Bangladesh (1973)

- ICMAB** : The Institute of Cost and Management Accountants of Bangladesh (1977)
- Financial Accounting** : A branch of accounting concerned with financial statements
- Cost Accounting** : A branch of accounting concerned with determination and control of costs of production of goods and services.
- Management Accounting** : A branch of accounting concerned with generation and supply of relevant planning and control information.
- Financial Audit** : Process of forming opinion attesting the fairness of financial statements.
- Cost Audit** : Process of verifying the accuracy of the costs obtained and criticizing the methods whereby they are developed.
- Behavioral Accounting** : Branch of accounting dealing in the psychological and sociological effects with reporting or accounting for enterprise activities.
- Accounting Information System (AIS)** : A special branch of accounting which accumulates, classifies, processes, analyses and communicates relevant information to both-external and internal parties.
- Management Information System (MIS)** : MIS department's function is to supply information relevant to a manager's decision-making.
- Tax Accounting** : Branch of accounting specialized in preparing accounts as per taxation laws of the country to bring maximum benefit to the assessee.
- System Design** : Deciding on the accounting procedures of recording, classifying, and summarizing so that required financial statements can be prepared.
- Electronic Accounting** : Accounting procedures to handle events occurred through internet and www.
- Stewardship Accounting** : Financial Accounting for determining business results and financial position.
- Control Accounting** : Cost Accounting for determination of cost of production and control of cost of production.
- Decision Accounting** : Management Accounting for supplying relevant information for management decisions.
- CPA** : Certified Public Accountant (U.S.A)
- CMA** : Certified Management Accountant (USA)
- CMA** : Chartered Management Accountant (UK)

<i>NAA</i>	: The National Association of Accountants
<i>IMA</i>	: The Institute of Management Accountants
<i>Historical Cost</i>	: Actual Cost / Past Cost.
<i>Reliability</i>	: Consistency
<i>Cost Control</i>	: Keeping incidence of costs within limits.
<i>Cost Reduction</i>	: Real and permanent decrease of costs without disturbing the value of the product or impairing the quality of the product.
<i>Cost Management</i>	: Delivery of same service at a lower cost or better service at the same cost and bringing the sense of cost consciousness among employees.

PRACTICE TEST

A. Self-Assessment Questions (SAQs)

True - False

1. Indicate which statements are true and which are false by using "T" and "F" respectively.
 - (a) An accounting system supplies necessary information to owners only
 - (b) Balance Sheets are normally prepared for one year.
 - (c) Cash Flow Statement shows the cash balance on the last day of the accounting period.
 - (d) As a student of accounting one may need accounting information relating to a corporation.
 - (e) A profitable concern cannot be risky.
 - (f) Expired costs are losses.
 - (g) Auditors' opinion is a guarantee of future profitability.
 - (h) Planning includes control and control is useless without planning.
 - (i) Accounting profession is expected to be independent.
 - (j) Audit opinions add credibility to accounting information.

B. Multiple Choice Questions (MCQs)

- (i) Which is not a section of Accounts Department of an organization?
 - (a) Budget section
 - (b) Salary bill section
 - (c) Inspection section
 - (d) Cost section
 - (e) None of the above
- (ii) Which one is a financial statement?
 - (a) Income Statement
 - (b) Balance Sheet
 - (c) Cash Flow Statement
 - (d) Value added statement
 - (e) All of the above
- (iii) Who can be an user of accounting information?
 - (a) Potential Investor
 - (b) An accounting Student
 - (c) Trade Union leaders
 - (d) Tax Commissioner
 - (e) All of the above

- (iv) Which one is not an accounting function?
 - (a) Determination of net income
 - (b) Determination of cost of production
 - (c) Determination of selling price
 - (d) Determination of financial position
 - (e) Determination of impact of introduction of incentive wage scheme on performance.

- (v) Which one is the objective of "Cost Audit"?
 - (a) To express an opinion on the financial statements prepared by management.
 - (b) To determine the cost of production
 - (c) To criticise the method of determining cost of production
 - (d) To supply accounting information for decision making
 - (e) None of the above.

- (vi) Which of the following subjects is related to management accounting?
 - (a) Economics
 - (b) Statistics
 - (c) Mathematics
 - (d) Psychology
 - (e) All of the above

- (vii) Which one is an element of control accounting?
 - (a) Setting standards
 - (b) Measuring performance
 - (c) Identifying causes of variance
 - (d) Taking rectifying measures
 - (e) All of the above

- (viii) Which one is not a body of professional accountants?
 - (a) ICAB
 - (b) IFAC
 - (c) ICMAB
 - (d) AICPA
 - (e) FASB

- (ix) Which one is not the primary objective of cost and management accounting
 - (a) Determination of cost of production of goods and services
 - (b) Controlling cost of production of goods and service
 - (c) Determination of income earned during an accounting year
 - (d) Generation of information for planning decisions
 - (e) Generation of information for control decisions.

- (x) Which one is the most recent objective of cost and management accounting?
 - (a) Determination of cost of production of goods and services
 - (b) Controlling of cost of production of goods and services
 - (c) Reduction of cost of production of goods and services
 - (d) Cost Management
 - (e) None of the above

C. Short Questions:

1. What is accounting? What are its functions?
2. Differentiate between
 - (a) Financial Accounting and Cost Accounting
 - (b) Financial Accounting and Management Accounting
 - (c) Cost Accounting and Management Accounting
3. What are the various branches of Accounting? Name the branches.
4. What are financial statements? What are their purposes?
5. Who are the users of accounting information? What are their needs?
6. What is information? Is it different form data?
7. Differentiate amount "Stewardship Accounting", "Control Accounting" and "Decision Accounting."
8. Do you support the use of the term "Management Accounting" in place of "Cost Accounting"?
9. Can you differentiate among 'Cost Reduction', 'Cost Control' and 'Cost Management'? Which one do you think will be most difficult to implement?
10. Differentiate between?
 - (a) Cost audit and financial audit
 - (b) AIS and MIS
11. Do you think that the introduction of Electronic Business has created a new challenge for accountants?
12. Explain the following :
 - (a) Influence of Behavior on accounting systems
 - (b) Influence of accounting systems on Behavior.

Answer to SAQs:

True-False : (a) F, (b) F, (c) F, (d) T, (e) F, (f) T, (g) F, (h) T, (i) T, (j) T.

MCQs : (i) e, (ii) e, (iii) e, (iv) c, (v) c, (vi) e, (vii) e, (viii) e, (ix) c (x) d

Lesson 3: Role of Management Accounting

Learning Objectives

After completing this lesson, you are expected to be able to:

- Explain the conceptual basis of management accounting.
- Explain the characteristics of management accounting information.
- Describe the evolution of management accounting.
- Describe the contribution of Business organizations to the development of accounting role.
- Relate the management process and the role of management accounting.
- Explain the nature and techniques of management accounting.
- Know the ethical standards for management accountants in practice developed in the U.S.A.

Introduction

Any definition of 'management accounting' specifies the role of management accounting in a business setting. It is already mentioned in the preceding lesson that management accounting is a subset of accounting process which provides planning and control information to the firm or components thereof. As it is manager-oriented, a study of its role must be preceded by some understanding of (i) what managers do, (ii) what information managers want, and the general business environment. For this reason, study objectives of this lesson include (i) conceptual basis of management accounting; (ii) characteristics of accounting information, (iii) evolution of management accounting, (iv) contribution of business enterprises to the development of management accounting and (v) the relationship between management process and the role of management accounting.

Management accounting is a subset of accounting process which provides planning and control information to the firm or components thereof.

Management accounting is : (Williamson)

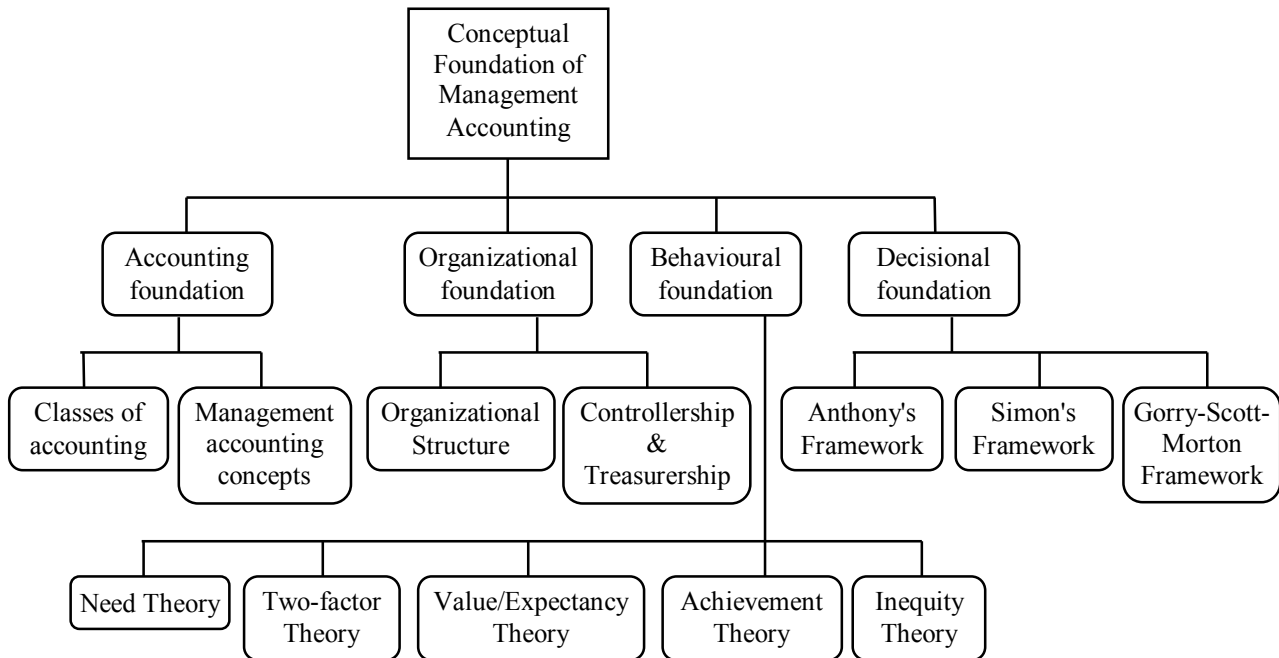
The provision of information required by management for such purposes as :

- a. formulation of policies;
- b. planning and controlling the activities of the enterprises;
- c. decision taking on alternative courses of actions;
- d. disclosure to those external to the enterprise;
- e. disclosure to employees;
- f. safeguarding assets;

Objective # 1 Conceptual Basis

Professor Ahmed Belkaoui in 1980 published one research monograph titled 'Conceptual Foundations of Management Accounting'. According to him "Management Accounting is becoming multi-dimensional

because of demands of its expanding role. It rests not only on accounting but also on *organizational, behavioral, decisional* and *other foundations*.



The Accounting Foundations

Management accounting has received some of its responsibilities and characteristics from accounting discipline. Discussions about this issue can be grouped into: (i) classes of accounting and (ii) accounting concepts

Classes of accounting: This particular issue has already been discussed elaborately in lesson number two. There are controversies among authors about the domain of cost accounting and management accounting. According to C.T. Horngren 'cost accounting is management accounting plus a part of financial accounting. On the other hand if we look into the changes of the name of a British institute we will get a different picture. For example :

- (i) The Institute of Costs and Works Accountants (ICWA)
- (ii) The Institute of Cost and Management Accountants (ICMA)
- (iii) The Chartered Institute of Management Accountants (CIMA)

In the U.S.A. also these professionals are known as CMA i.e. Certified Management Accountants. The tendency of giving more importance to management accounting is clear. Still in Bangladesh, these two branches of accounting are differentiated. At this moment the regular and repetitive aspects of cost determination and control can be termed as the responsibility of cost accounting, and the information supply for decision making can be termed as management accounting. As the things are proceeding, there is every possibility that the aspect of cost

determination can be a part of financial accounting and the control aspect of cost accounting will be merged with management accounting.

Management Accounting Concepts

In contrast to financial accounting, management accounting relies on techniques from various disciplines (Math, Economics, Psychology, Statistics, Operations Research, Sociology etc.) and is not governed by any generally accepted accounting principles. The Committee on Management Accounting of the American Accounting Association (AAA) developed a definition of management accounting :

The application of *appropriate techniques and concepts* in processing the historical and projected economic data of an entity to assist management in establishing plans for reasonable economic objectives and in the making of rational decisions with a view towards achieving these objectives. It includes the methods and concepts necessary for effective planning for choosing among alternative business actions and for control through the evaluation and interpretation of performance. Its study involves consideration of ways in which accounting information may be accumulated, synthesized, analyzed and presented in relation to specific problems, decision, and day to day tasks of business management."

Techniques may be selected from accounting, mathematics, sociology, psychology, economics, and statistics.

- Accounting : Income/depreciation
Allocation of cost
Accumulation of cash
- Mathematics : Differentiation, Integration, Linear Programming, Discounting, Compounding.
- Statistics : Standard Deviation, Variance, Regression, Correlation.
- Economics : Marginalistic approach, Wealth, Utility measurement, Growth.
- Psychology : Motivation, Behavior, Leadership.
- Sociology : Grouping, Conflict, Comparison, Regional Effect, Religion.

Concepts : There is no list of accepted management accounting concepts. However in 1972 AAA committee on courses in Managerial Accounting identifies the following as concepts :

- i) Measurement : "an assignment of numbers to an entity's past, present or future economic phenomena according to certain rules."
- ii) Communication : The procedures by means of which one

mechanism affects another mechanism.

- iii) Information : data that reduce the user's uncertainty.
- iv) System : 'an entity consisting of two or more interacting components or subsystems intended to achieve a goal.'
- v) Planning : 'management function of setting objectives, establishment of policies, and choosing means of accomplishment.'
- vi) Feedback : 'the output of a process that returns to become an input to initiate control'.
- vii) Control : 'the monitoring and evaluation of performance to determine the degree to which actions conform to plan.

The Organizational Foundations :

From management point of view management accounting rests on organizational foundations from two angles (i) organizational structure and (ii) control. Management often changes these for improved functioning.

Organizational structure is a firm's formal role configuration, procedures, governance and control mechanism and authority and decision-making process.

Organizational Structure : "Organizational structure is a firm's formal role configuration, procedures, governance and control mechanism and authority and decision-making process." Elements of organizational structure may affect management accounting - its techniques, approaches and role in the firm. It is claimed that the following elements have strongest influence on management accounting :

- (a) Organizational chart : It reflects the system of relationship of an organization's employees. This relationship is the result of deliberate, conscious planning of the areas of *responsibility, specialization* and *authority* for each member of the organization.
- (b) Line and Staff : A line authority gives a superior a line authority over a subordinate in direct line or step where as the nature of the staff relationship is advisory. Management accounting is supportive by nature, providing services and assistance to other units of an organization. It is a specialized decision-support system.

Controllership : The head of the accounting department in an organization is generally known as the Controller/Comptroller/Director. The controller has a line relationship within his/her department, but she is a staff member in the top management team. As stated by Prof. Belkaoui the main responsibilities of the controller are as follows :

- (i) Responsibilities for the supervision of all facets of financial accounting leading to the publication of annual reports.

- (ii) Coordination of all activities leading to the establishment of the master budget and long term plan of the firm.
- (iii) Maintenance of a system of control through proper circulation of performance reports.
- (iv) Playing an essential part in the proper collection, dispersion, and channeling of pertinent and timely information as a designer and activator of the basic organizational communications system, the electronic data processing system.

The Financial Executive Institute (USA) has grouped the financial responsibilities in the following ways :

Controllership Functions (Cost and Management Accounts)	Treasurership Functions (Financial Accounting)
1. Planning & Control	1. Provision of Capital
2. Reporting and Interpreting	2. Relations
3. Evaluating and Consulting	3. Short term financing
4. Tax Administration	4. Bank & Custody
5. Government Reporting	5. Credits and Collection
6. Protection of assets	6. Investments
7. Economic Appraisal	7. Insurance

The Behavioral Foundations :

In lesson # 2 we have discussed behavioral accounting as the third branch of accounting. This behavioral aspect of accounting is very much related to management accounting. The control aspect of accounting is nothing but to influence the behavior of individuals in the organization. The literature on motivation identifies five theories of motivation : need theory, two-factor theory, value/expectancy theory, achievement theory and inequity theory. These theories have one of the following two approaches :

- (i) Identification of factors within an individual and the environment that activate high performance, or
- (ii) Explanation/description of how behavior is activated, what directs it, and how it is controlled and stopped.

These theories have distinct implications on management accounting.

Title of the theory	elements	Theory	Responsibilities of Management accounting
1. Need Theory Abraham Maslow (1943)	Physiological need Safety need Social need Esteem need	People are motivated to satisfy a hierarchy of needs	Assuming that individuals are well-remunerated, the emphasis should be on the introduction of accounting

	Self-actualization		techniques in general and control techniques in particular that are consistent with the satisfaction of higher level needs.
2. Two factor Theory Frederick Herzberg	<p>Hygiene Factors:</p> <ul style="list-style-type: none"> • Policies and administration • Supervision • Working conditions • Interpersonal relations • Money, status and security <p>Motivates :</p> <ul style="list-style-type: none"> • Achievement • Recognition for accomplishment • Challenging work • Increased responsibility • Growth & Development 	Dissatisfied factors do not motivate people to work more, Satisfying factors motivate people to work more	<p>To contribute to employee motivation accounting techniques should focus on better measurement and reporting of achievement, recognition, work, responsibility and advancement.</p> <p>To make jobs more meaningful, accounting should focus on job enrichment. Managers effect job enrichment by designing tasks that create positive feelings about the job and by building in the opportunity for personal achievement, recognition, challenge and growth</p>
3. Value/ Expectancy Theory Kurt Lewin (1951)	Initiation of behavior, Maintenance of behavior and Termination of behavior	An individual chooses his/her behavior on the basis of (i) expectations that the behavior will result in a specific outcome (ii) the sum of the valences i.e. personal usefulness or rewards derived from the outcome.	<ul style="list-style-type: none"> • Determination of what extrinsic rewards follow work goal accomplishment • Timely reports that work goal accomplishment leads to exercise rewards • Give individuals a greater role in goal setting and task directing • Recognize and support the individuals effort • Increase the net intrinsic valence associated with goal directed behavior
4. Achievement Theory	Desire of people to be challenged, to be	Individuals assume responsibilities for	(i) Necessity of constructing ways to

David C. McClelland & Atkinson (1951)	innovative, and to adopt an achievement-oriented behavior	individual achievement, seeks challenging tasks, and take calculated risks commensurate with the probabilities of success.	develop the achievement motive at all managerial levels. (ii) Need to introduce techniques and to report accounting information that encourages and facilitates the performance of high achievers.
5. Inequity Theory E. Walster, E. Berseheid, G.W. Walster & J.S. Adams 1965, 1973	Individuals motive : <ul style="list-style-type: none"> to maximize own gains. to maintain equity in the relationship Individuals compare own situations with others situations	Rewards must be fair and equitable Equity norms can reduce conflict.	<ul style="list-style-type: none"> Insure correct and accrue measurement. Report performance and rewards Methods of performance measurement and rewards should be made public.

The Decisional Foundations :

Management accounting attempts to help and support an organizations decision-making system. To supply necessary information, accounting should be aware of the kinds and levels of decisions involved. Information systems literature proposes the following conceptual framework :

- Robert N. Anthony's Framework
- H.A. Simon's Framework
- G.A. Gorry & N.S. Scott-Morton Framework

Anthony's Framework : Anthony's framework is a hierarchical decision system - (i) Strategic Planning, (ii) Management Control and (iii) Operational Control.

Strategic Planning : Highest level
: Determination of objectives
: Resources required to attain those objectives
: Policies to govern resources.

Management Control : Managers insure that resources are obtained and used most effectively and efficiently.

Operational Control : Insures that specific task and transactions are carried out effectively and efficiently

For management accounting "this framework implies a tailoring of the data to the context and category of the particular decision. It also calls for different approaches in the areas of strategic planning, management control and operational control."

Simon's Framework : According to Simon all problems can be broken down into the following three distinct phases :

- Intelligence : Identification of one or more problems
Collection of information
- : Establishment of goals and evaluative criteria.
- Design : Delineating and analyzing various courses of action to solve the problem identified.
- Choice : Choosing the best alternative.

Role of management accounting :

- (a) Structured Decision : Providing and assisting in the use of routines.
- (b) Unstructured Decisions : Information based on decision style, intuition, or heuristic techniques.

Gorry - Scott - Morton Framework : They combined the Anthony's framework and Simon's framework in one matrix model - Structured - Unstructured and Strategic - Operational.

Gorry-Scott - Morton

Anthony Simon	Operational control	Management control	Strategic control
Structured	Accounts Receivable Order entry Inventory reporting	Budgeting short term forecasting Engineering cost Linear Programming for manufacturing	Fleet Mix Warehouse and plant location
Semi-structured	Inventory Control Production scheduling Bond Trading Cash Management	Variance Analysis Overall Budget Budget preparation Hiring personnel	Merger & Acquisition Capital Acquisition Analysis New Product Planning
Unstructured	PERT Cost System	Sales and production	R& D Planning

[Ref. Belkaoui]

Above chart clearly depicts what should be the role of management

accounting in each issue. This also shows the quality of people needed to undertake the responsibility. Management accounting "requires people with different skills and attitudes, different technologies, different models and different processes to accommodate structured and unstructured decisions one hand and strategic planning, management control and operational control on the other."

Qualitative Characteristics of Management Accounting Information:

AAA'S Committee on Basic Accounting Theory in 1966 recommended four basic standards as providing criteria to be used in evaluating potential accounting information. Management accountants at the time of generating and supplying information must consider the recommended standards. A Statement of Basic Accounting Theory (ASOBAT) specifies the following qualitative standards :

a. Relevance b. Verifiability c. Freedom from Bias d. Quantifiability.

Relevance - the primary standard :

Informational need of the potential users must be considered at the time of generating information. Information must be useful to the action it is designed to facilitate.

Verifiability :

This means that two or more qualified people will reach to the same conclusion after examining the same data.

Freedom from bias :

Facts have to be impartially determined and reported.

Quantifiability :

This refers to assignment of numbers to the information generated. Money is the most common but not the only number used by accountants.

ASOBAT suggests the following guidelines for communication of accounting information :

- i) Appropriateness to expected use
- ii) Disclosure of significant relationship
- iii) Inclusion of environmental information
- iv) Uniformity of practice within and among entities.
- v) Consistency of practice over time.

Belkaoui has arranged and interpreted all these qualities in the following hierarchical structure.

?????????? Chart ????????????????

Neutrality : Free from biases

Relevance : Useful to the action

Timeliness : Available when needed

Understandability : Clarity of information

Completeness : Correspondence between accounting data and events

Consistency : Same methods used by different firms and a firm over time.

Evolution of Management Accounting [19th & 20th Century)

Management accounting has occupied a very important place in every organization as most of the decisions taken by management depend on the information supplied by accounting section of an enterprise. This is not a sudden event. Management accounting has earned this by the contribution of innumerable accountants, executives, researchers and enterprises.

According to some, industrial revolution has initiated factory system which ultimately contributed to the development of accounting with its branches. Let us consider some of the comments of accounting scholars :

A.C. Littleton : "Cost accounting is not old by several centuries as is mercantile bookkeeping by double entry..... . Cost accounting, therefore, is one of the many consequences of the industrial revolution."

D.R. Scott : Before industrial revolution, accounting information was generated only for external parties. With the introduction of mass production, for control purposes, cost accounting was needed.

Walter Scott : Cost accounting is the product of Twentieth Century although the causes of its introduction existed even before.

Paul Garner claims that cost accounting existed during 14-16th centuries. The following table is prepared on the basis of Garner's study to show the historical development of cost and management accounting.

Year	Authors	Titles/Main issues	Topics included in the books
1697	John Collins (England)	The Perfect Method of Merchant Accompts	Determination of Quantity and Value of raw materials

1714	Roger North	The Gentleman Accountant	Display of performance of various departments of an enterprise
1750	James Dodson	The Accountant or the Method of Book Keeping	Accounts of various processes of shoe making and different types of shoes
1760	John Mair	Book Keeping Methods	Boiling house book Steel house book Plantation book
1777	Wardhaugh Thompson	The Accountants' Oracle	Accounts of Spinning Transfer from one accounts to another Unit cost Quantity of production and value Process cost accounts
1788	Robert Hamiton	Introduction to merchandises	Accounts of works in process Finished Goods account Cost of production book
1817	Anselme Payen (France)	Essai surla Tenuedes Livers d'um Manufacturer Essai Sur la Tenue des Livers d'um Manufacturer	Job Account Quantity and value Cost of Inventory Asset Account Accounts of spoiled products Accidental loss Cost of production account and reconciliation of financial accounts
1824	L.F.G. De Cazaux	Farm Accounting	Valuation Allocation of Depreciation Interest
1827	M. Godard (France)	Traite Général et Sommaire de la Comptabilite Commerciable	Determination of process cost Allocation of Depreciation Raw materials account Monthly cost of production
1829	Mce Jeanmin (France)	Traité de la Comptabilite	Debit : Raw materials Direct labour Other items Credit : Cost of finished goods Loss Spoiled goods
1832	F.N. Simon (France)	Methode Complete de la tenue des liveres	Double Ledger : General Ledger Subsidiary Ledger Allocation of Rent Process Account

1862	Louis Mezieres (Rance)	Comptabilité Industrielle et Manufacturiere	Accounts of Raw materials Quantity and value
1872	M. Dugué	Direct cost	Direct cost Transfer of direct cost Depreciation, rent Overhead @ 5%
1880	M.E. Claperon	Cours de comptabilite	Absorption of overhead @ ½.
1818	F.W. Cronhelm (England)	Double Entry by Single	Perpetual Inventory System
1823	Charles Babbage	On the economy of machinery and manufactures	Organisation of machines Process Labour hour Work analysis
1854	John Fleming (U.S.A.)	Book keeping by Double Entry	Factory accounts Debit all expenses Credit sales and inventory
1858	Frederick C. Krepp (England)	Statistical Book Keeping	Average cost Special method for production
1873	Authors' name not available	An Account	Net expense method Debit - Raw materials wages Expenses
1878	Thomas Battersby	Selling price determination	Six methods of fixing selling price : Raw materials plus wages overhead and profit
1881	J.H. Goodwin (New York)	Improved Book Keeping & Business Manual	Separate accounts for Goods : Production Account should be debited by Materials used and materials spoiled
1850	George S. Gibb	The Saco-Lowell Shops	Perpetual method of inventory system Special production account Unit cost

Contributions of Business Organizations to the development of cost and management accounting techniques :

Robert S. Kaplan in 1984 published one article on the Evaluation of Management Accounting. In that article, he made an attempt to show the contributions of different U.S. business enterprises to the development of management accounting. It is interesting to note that most of accounting techniques, we are using today in higher level management accounting classes, were developed and used by management executives to suit their enterprises. Another important phenomenon is that the techniques were developed to suit their management policy and organization structure. A summary of the contributions of business enterprises is given in the following table.

Enterprises, Period & Nature of Business	List of Contributions in cost and management accounting
1. Textiles Industry & Railroad 19th Century	Integration between various processes Demand for relevant information for interval planning and control during nineteenth century
2. Layman Millis Corporation (1855) Textiles	Maintenance of accounts under double entry system Information relating to cost of production : Labour productivity Effect of changes in machines layout. Control over raw materials
3. U.S. Railroads (1860-70)	Planning and control system Summary reporting Evaluation and control of performance Determination of cost of translation per ton mile Activity ratios
4. Mass production and distribution (1880s) Andrew Carneges Steel Company	Internal reporting Statement of divisional performance Statement of regional performance Control over raw materials and labour Keeping fixed costs undistributed
5. Garke & Fells (1887) (Author)	Factory Accounts : Integrated Accounting System
6. Scientific Management Movement (20th Century) Frederick W. Taylor and Harrington Emerson	Work Analysis Time and Motion study Standard setting for materials and labour Absorption of overheads Importance of determining standard cost.
7.	Use of Break-even chart
8. J. Maurice Clark 1923 (Chicago)	Analysis of nature of overheads and their impact on decision making Use of costs in various decision making Use of statistical tools in determining the behaviour of costs
9. (Several enterprises)	Assess Operating efficiencies Aid fixing selling prices Motivation and control of labour
10. Du Pout (1903) (Powder Company)	Centralized Accounting System Annual Operating forecast ROI for decentralized functional organization Sales report and flexible budget Allocation of resources and compensation on the basis of uniform performance criteria. Use ARR Determination of target price to yield the desired ROI Incentive plan
11. G.M. (1920) (Under Pierre	Centralized Control with decentralized responsibilities

Enterprises, Period & Nature of Business	List of Contributions in cost and management accounting
du Pont)	Annual operating forecast Sales report and flexible budget Allocation of both resources and compensation on the basis of performance Profit sharing Market-based transfer prices
12. Development after 1925 (Contribution by academicians)	Capital Budgeting (DCF method) Residual Income (RI) Transfer pricing (Full cost, standard cost market price, negotiated price) Use of operations research techniques Use of information economics and agency theory.

Management Process and the Role of management accounting :

Heinz Wehrich & Harold Koontz :

"Management is the process of designing and maintaining an environment in which individuals, working together in groups, efficiently accomplish selected aims."

They explained the definition further as follows :

1. "As managers, people carry out the managerial functions of planning, organizing, staffing, leading and controlling;"
2. Management applies to any kind of organization;
3. It applies to managers at all organizational levels;
4. The aim of all managers is the same : to create surplus.
5. Managing is concerned with productivity; This implies effectiveness and efficiency"

As explained above, management process includes (a) planning; (b) organizing; (c) staffing, (d) leading and (e) controlling. Let us see how and what role management accounting can play in the management process.

Management Process	Assigned Responsibilities	Relevant data and information	Techniques of Accounting
Planning	Deciding in advance what is to be done Future purchase, production, sales etc.	Sales forecast Deciding firms market share Production forecast Expected profit or loss	Sales Budget Production Budget Production cost Budget Budgeted Income Statement

		Expected financial position Ideal production system	Budgeted Balance sheet Capital Budgeting
Organizing, Staffing and directing	Procurement of physical facilities Procurement of raw materials Procurement of human resources Training of human resources Supervision Direction	Nature, capacity and cost of needed machinery Quantity, Quality, Sources and cost of raw materials Span of supervision Instructions	Capital Budgeting Raw materials Purchase Budget Raw Materials Inventory Budget Production Budget Production Cost Budget Statement of actual performance
Controlling	Managing the firm in a desired way	Deciding goals Deciding objects Measuring actual results Comparison of actual and expectation Causes of variation Rectification measures	Setting standards for Raw materials Labour Machine Hour Maintenance of accounts Variance Analysis Variance Investigation Proposed rectification measures Verification of effectiveness of remedial measures
Decision Making	Replacement of machines Selection of machines Addition of new products Dropping product line Make or Buy Evaluation of special order Decision relating to further processing	Determination of additional costs Determination of net income	Comparative Analysis Determination of net contribution Determination of net income Analysis of opportunity costs
Special circumstances	Cost Centre: Cost minimization	Unit Cost, Total Cost, Incremental	Cost Analysis ROI and RI

Segment performance Decentralization	Profit Centre: Profit Increase Investment Centre: Positive NPV Transfer pricing	cost Profitability Net Present Value	NPV & IRR
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In addition to the activities mentioned in the above chart, a manager has to coordinate activities of different departments and motivate people to work more sincerely. In this respect also a management accountant can be of much help. Through the preparation of budget, coordination can be achieved by informing the related departments and sections of their mutual responsibilities. Moreover, budgets can be used as a communication means from top to bottom of the targets. By encouraging participation in the budget preparation process, a management accountant can ensure the commitment of the employees to fulfil the budgeted target. Moreover, by introducing incentive scheme, he/she can help management motivating employees to work more.

Nature of Management Accounting

Management accountants always assist managers in solving managerial problems and in taking various decisions. Therefore, the activities of a management accountant have some special characteristics. Some of the them are mentioned below :

(i) Future orientation : All decisions are related to future. Naturally, all relevant data will be related to future.

(ii) Approximate data : Future is uncertain. Therefore, any probabilistic estimate cannot be hundred percent accurate.

(iii) Selection but not storing of information: Financial accounting is designed to accumulate and store information. Where as, a management accountant always tries to select relevant information.

(iv) Not continuous: Each problem is independent. Information should be collected and generated relevant to that problem.

(v) Variable format for statement: There is no fixed format for management accounting statements. It depends on the will of the preparer and the user.

(vi) Analytical : Every statement is analytical. Causes of effects are determined through analysis.

(viii) A management accountant does not take decisions, but help decision-making.

Management Accounting Techniques

With a view to help management solving business problems and also to generate relevant information for taking decision, a management

accountant uses a good number of techniques. A list of some of the techniques is given below:

- **Statement of Cost of Production** : On the basis of actual cost of production a statement of cost of production is prepared to determine total cost and unit cost of production.
- **Analysis of Financial Statements** : On the basis of data included in various financial statements, ratios are calculated to determine (i) profitability (ii) activity (iii) solvency and (iv) liquidity of an enterprise.
- **Determination of Standard Costs**: Standards are set to control the activities with an object to improve performance gradually.
- **Budgetary Control** : It is a control through budgets. Budgets are guidelines for the future. Actual performance is compared with the budget to find out the difference and to identify the causes of difference so that steps can be taken to remove the causes.
- **Determination of Variable Cost of Production**: This technique is used to decide whether to accept or reject special orders at a price below the regular price.
- **Operations Research Techniques**: Operations research techniques like "Inventory Model", "Linear Programming Model", Transportation Model can also be used in management accounting.
- **Miscellaneous techniques**: According to somebody, "Financial Planning" "Cash Flow Statement" and "Cash Budget" can be used in management accounting. These can better be termed as techniques of financial management.

Professional Ethics

Management accountants have many obligations to serve to the following parties :

- (i) the enterprises they serve
- (ii) their profession and
- (iii) the public

Every performer must follow some principles, rules and moral standards at the time of carrying his / her responsibilities. Accounting profession is not an exception to this. In Bangladesh, the ICAB has accepted the Ethical Standards developed by the IFAC to be followed by the members. The ICMAB does not have any such ethical standards. The Institute of Management Accountants, U.S.A. has developed some ethical standards for practitioners. Ethical standards mentioned below are so general that these may be applicable to any performer on whose opinion the actions of other depend :

Competence

Management Accountants have a responsibility to:

- Maintain an appropriate level of professional competence by ongoing development of their knowledge and skills.
- Perform their professional duties in accordance with relevant laws, regulations, and technical standards.
- Prepare complete and clear reports and recommendations after appropriate analyses of relevant and reliable information.

Confidentiality

- Refrain from disclosing confidential information acquired in the course of their work except when authorized, unless legally obligated to do so.
- Inform subordinates as appropriate regarding the confidentiality of information acquired in the course of their work and monitor their activities to assure the maintenance of that confidentiality.
- Refrain from using or appearing to use confidential information acquired in the course of their work for unethical or illegal advantage either personally or through third parties.

Integrity

Management accountants have a responsibility to

- Avoid actual or apparent conflicts interest and advise all appropriate parties of any potential conflict.
- Refrain from engaging in any activity that would prejudice their ability to carry out their duties ethically.
- Refuse any gift, favor, or hospitality that would influence or would appear to influence their actions.
- Refrain from either actively or passively subverting the attainment of the organization's legitimate and ethical objectives.
- Recognize and communicate professional limitations or other constraints that would preclude responsible judgment or successful performance of an activity.
- Communicate unfavorable as well as favorable information and professional judgments or opinions.
- Refrain from engaging in or supporting any activity that would discredit the profession.

Objectivity

Management accountants have a responsibility to

- Communicate information fairly and objectively.
- disclose fully all relevant information that could reasonably be expected to influence an intended user's understanding of the reports, comments, and recommendations presented.

Key Words used

Management accounting: A subset of accounting process which provides planning and control information to the firm or components thereof.

Measurement: Assignment of numbers to an entity's past, present and future phenomena according to certain rules.

Information: Data that reduce uncertainty of the user.

System: An entity consisting of two or more interacting components.

Planning: Management functions of setting objectives, establishment of policies and choosing means of accomplishment.

Feedback: The output of a process that returns to become an input to initiate control.

Control: The monitoring and evaluation of performance to determine the degree to which actions conform to plan.

Organization Structure: A firm's formal role, configuration, procedures, governance, control mechanism and authority and decision-making process.

Organization Chart: The system of relationship of an organization's employees.

Line and Staff: A supervisor has a line authority over his / her subordinates, whereas a staff is an advisory relationship.

Controllorship: A controller has a line relationship within his / her own department.

Need Theory: Abraham Maslow (1943) suggested five categories of needs-physiological, safety, social, esteem and self-actualization.

Two-factor Theory: Frederick Herzberg suggested

- (a) Hygiene Factors do not motivate to work
- (b) Motivators: Recognition, Achievement etc.

Neutrality: Free from biases.

Relevance: Useful to the action.

Timeliness: Available when needed.

Completeness: Correspondence between accounting data and events

Consistency: Same methods used by different firms and by one firm over time.

ROI: Return on Investment.

RI: Residual Income

NPV: Net Present Value

IRR: Internal Rate of Return

Cost Centre: Sections or Divisions given the authority to incur costs.

Profit Centre: Sections / Divisions with the authority to incur costs and earn revenue.

Standard: A desired objective

Budget: A quantitative plan of activities for a period not more than one year.

Investment Centre: Sections/Departments/Division with the authority to expand.

ASOBAT: A Statement of Basic Accounting Theory

Ethics: A system of moral principles and their application to particular problems of conduct, specially the rules of conduct of a profession to govern the behavior of members.

Confidentiality: Secrecy : Not making something public

Competence: Ability to perform.

Integrity: Purity of mind

IFAC: The International Federation of Accountants

PRACTICE TEST

A. Self-Assessment Questions (SAQs)

True - False

1. Indicate which one is true/false by using 'T'/'F' respectively.

- (i) Timely information is relevant.
- (ii) Comparability needs consistency.
- (iii) Verifiability ensures representational faithfulness.
- (iv) Storing of information is one of the important functions of management accounting.
- (v) Assisting decision-making but not decision-making is the responsibility of Management accounting.
- (vi) Management accounting is multi-disciplinary in nature.
- (vii) CMA in the U.S.A. is Chartered Management Accountant.
- (viii) Information reduces the user's uncertainty.
- (ix) Elements of organization structure can affect management accounting.
- (x) Staff authority is not an element of organization structure.
- (xi) Tax administration is a treasurership function.
- (xii) Provision of capital is a controllership function.
- (xiii) People are motivated to satisfy a hierarchy of needs.
- (xiv) Hygiene factors are motivators.
- (xv) Dissatisfying factors motivate workers to work more.
- (xvi) Money is a motivator.
- (xvii) In motivation theory dissatisfies and satisfies are the same.
- (xviii) Proponents of 'Inequity Theory' are Walster, Adams and Berscheid.
- (xix) The difference between 'Management Control' and 'Operational Control' is a matter of levels.
- (xx) Decisions can be grouped as 'Structured' and 'Unstructured'.
- (xxi) Gorry-Scott-Morton framework is a combination of Anthony's framework and Simon's framework.
- (xxii) Planning is deciding in advance what is to be done.
- (xxiii) There are fixed formats for management accounting statements.
- (xxiv) A management accountant is a line authority within his/her own department.
- (xxv) Management accounting is continuous in an organization.
- (xxvi) To management accountants timeliness is more important than precision.
- (xxvii) Budgets are not related to standards.
- (xxviii) A line authority cannot take decision, rather helps other to take decisions.
- (xix) Management is what a management does.
- (xxx) Control starts with setting standards.

B. Multiple Choice Questions (MCQs):

1. Which one of the following is included in the management process?
 - (a) Planning
 - (b) Organizing and directing
 - (c) Controlling
 - (d) Decision-making
 - (e) All of the above
2. Which one is the duration of a budget in a business enterprise?
 - (a) One year
 - (b) One day to one year
 - (c) Two years
 - (d) Five years
 - (e) Two years to ten years
3. Which one is not needed for effective control?
 - (a) Determination of expected responsibility results.
 - (b) Determination of actual results.
 - (c) Determination variances with their causes.
 - (d) Investigation of all variances.
 - (e) Taking remedial measures and determining their effectiveness.
4. Which one is not a function of management accounting?
 - (a) Deciding workable plan
 - (b) Selecting alternative courses of action
 - (c) Determination of either profit or loss of the period.
 - (d) Valuation
 - (e) Work analysis
5. Which one is not the technique of management accounting?
 - (a) Determination of cost of production of goods and services.
 - (b) Preparation of financial statements of the period.
 - (c) Analysis of financial statements.
 - (d) Determining standard costs.
 - (e) Preparation of Cash Flow statement.
6. Which one is not a nature of management accounting?
 - (a) Selection of information
 - (b) Approximate information
 - (c) Accurate information
 - (d) Future information
 - (e) None of the above

7. Which one is not an element of organization?
 - (a) Procurement of resources
 - (b) Determination of standards
 - (c) Supervision
 - (d) Directing
 - (e) None of the above
6. Which one is not a nature of management accounting?
 - (a) Selection of information
 - (b) Approximate information
 - (c) Accurate information
 - (d) Future information
 - (e) None of the above
7. Which one is not an element of organization?
 - (a) Procurement of resources
 - (b) Determination of standards
 - (c) Supervision
 - (d) Directing
 - (e) None of the above
8. For which does management accounting makes provisions for information?
 - (a) Planning and controlling of activities
 - (b) Formulation of policies
 - (c) Decision making on alternative courses of action
 - (d) Disclosure to employees
 - (e) All of the above.
9. Which one is not termed as a controllership function?
 - (a) Planning and control
 - (b) Tax administration
 - (c) Investment
 - (d) Protection of assets
 - (e) Government Reporting
10. Which one is not a treasurership function?
 - (a) Provision of capital
 - (b) Investors relation
 - (c) Bank and custody
 - (d) Reporting and Interpreting
 - (e) Insurance
11. Which one is not a motivator?
 - (a) Money
 - (b) Achievement
 - (c) Recognition
 - (d) Increased responsibility
 - (e) Challenging work

12. Which one is not an element of physiological needs?
 - (a) Food
 - (b) Shelter
 - (c) Security
 - (d) Sex
 - (d) All of the above

13. Which one is not an element of operational control?
 - (a) Accounts Receivable
 - (b) Inventory reporting
 - (c) Order entry
 - (d) Warehouse & plant location
 - (e) Inventory control

14. Which one is not an element of strategic control?
 - (a) Merger and Acquisition
 - (b) New product planning
 - (c) Cash Management
 - (d) R & D planning
 - (e) Plant location

15. Which one is not an element of management control?
 - (a) Budgeting
 - (b) Short-term forecasting
 - (c) Variance Analysis
 - (d) Accounts Receivable
 - (e) Hiring personnel

16. Which one is not a characteristic of management accounting information?
 - (a) Relevance
 - (b) Verifiability
 - (c) Accuracy
 - (d) Quantifiability
 - (e) Freedom from bias

17. Which one is not included in the communication guidelines suggested by ASOBAT?
 - (a) Appropriateness of expected use
 - (b) Disclosure of significant relationship
 - (c) Consistency of practice overtime
 - (d) Behavioral consequence
 - (e) Inclusion of environmental information

18. Which one is the historical evidence of the use of perpetual inventory system in England?
 - (a) 1829 Mce Jeannin
 - (b) 1818 F.W. Cronhelm
 - (c) 1824 L.F.G De Cazaux
 - (d) 1788 Robert Hamilton
 - (e) None of the above

19. Who wrote the book "The Gentleman Accomptant"?
- (a) Roger North in 1714
 - (b) Robert Hamilton in 1788
 - (c) L.F.G. De Cazaux in 1824
 - (d) James Dodson in 1750
 - (e) None of the above
20. Who is one of the proponents of "Scientific Management"?
- (a) H. Emerson
 - (b) Andrew Carnegie
 - (c) Du Pont
 - (d) Maurice Clark
 - (e) None of the above

C. Short Questions:

1. What is management accounting? State the major areas for which management needs information from accounting.
2. What do you mean by conceptual foundation of management accounting?
3. What are the various concepts borrowed by management accounting from other discipline?
4. Explain the organizational foundation of management accounting.
5. Differentiate between "Controllership Functions" and "Treasurership Functions".
6. State the following theories :
 - (a) Need Theory
 - (b) Two-factor Theory
 - (c) Achievement Theory
7. State the following Theories :
 - (a) Expectancy Theory
 - (b) Inequity Theory
8. Explain the Authority's Framework.
9. Explain Simon's Framework.
10. Explain Gorry-Scott-Morton Framework.
11. Discuss the qualitative characteristics of accounting information.
12. What are the guidelines for communication of accounting information?
13. Cite a few examples of contributions made by U.S. corporations to the development of management accounting.
14. Explain the role of management accounting in different management processes.
15. Name some of the management accounting techniques.

Answer to SAQs

True - False

(i) T	(vii) F	(xiii) T	(xix) T	(xxv) f
(ii) T	(viii) T	(xiv) F	(xx) T	(xxvi) T
(iii) F	(ix) T	(xv) F	(xxi) T	(xxvii) F
(iv) F	(x) F	(xvi) F	(xxii) T	(xxviii) F
(v) T	(xi) F	(xvii) F	(xxiii) F	(xxix) F
(vi) T	(xii) F	(xviii) T	(xxiv) T	(xxx) T

MCQs

(1) e	(5) b	(9) c	(13) d	(17) d
(2) b	(6) c	(10) d	(14) c	(18) b
(3) d	(7) b	(11) a	(15) d	(19) a
(4) c	(8) e	(12) c	(16) c	(20) a