
UNIT 5 HUMAN RESOURCE ACCOUNTING

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5.0 OBJECTIVES

After going through this Unit, you should be able to:

- understand and define the concept of human resource accounting,
- describe the main objective and the managerial role of human resource accounting,
- appreciate the role of information as a key factor in human resource accounting system,
- **understand the basic concept and the measurement aspects of human resource costs,**
- follow the concept and various methods of monetary and non-monetary valuation of human resources, and
- understand the process and problems of designing and implementing a human resource accounting system.

5.1 INTRODUCTION

Effectiveness is best measured by comparing inputs with the desired output. This gives a direct and positive measure of effectiveness as well as it provides comparative information to show how effectiveness has changed over a period of time. It requires a common base for measuring inputs and outputs. Measurement is the process of representing the properties or qualities of objects in numerical terms. In our control systems, measurement has a dual function: It provides information that can be used for evaluating performance, and to make corrections in goal directed behaviour. This is the informational function of measurement. The accounting system, with its measures of financial and managerial performance, is a part of overall measurement system that contributes to the informational function. The informational function also draws on non-financial **measures** of performance such as product quality and organisational climate. It may be noted that the very act of measuring something has an effect on people's behaviour because people tend to pay more **attention** to the various aspects of jobs or **performance** that are measured.

In human resource planning, unlike other functions, there is still the problem of **measuring itself**; how can personnel inputs be measured using some common standards inevitably financial? This presents serious difficulty for the personnel function itself if it has to measure that output in financial terms. One attempt to apply financial denominators to human resources is the human asset or human resource accounting which endeavours to measure both the cost and the value of people to organisations.

The subject of approach to measurement of human resources through human resource accounting has tempted personnel specialists and academics alike. The early development of human resource accounting was carried out by a team of researchers from the University of Michigan's Institute for Social Research under the guidance of Rensis Likert. Likert felt that the failure to show the human resources of the firm as an asset on the firm's books caused management to undervalue these resources in its decision-making. Early development work by the research team at the R.G. Barry Corporation at Columbus, Ohio emphasised the capitalising of expenditure on employee recruitment and development, using the **historical-cost** approach. The money spent on recruiting and training of employees was **treated** as a capital investment to be amortized over several years, since the benefits were presumed to continue over that period. R.G. Barry Corporation presented the human resource accounting **information** as an addendum to its regular financial statements in its report to stockholders. However, the primary use of information is for managerial control and decision-making.

This Unit discusses the various aspects related to Human Resources Accounting.

5.2 THE CONCEPT OF HUMAN RESOURCE ACCOUNTING (HRA)

The subject of offering measures of the values of people to the organisation through human resource accounting is an essential component of HRP at all levels. According to **Flamholtz** and Lacey (1981):

"Human **Resource** Accounting may be defined as the measurement and reporting of the cost and value of people as organisational resources. It involves accounting for investment in people and their replacement costs, as well as accounting for the economic values of people to an organisation."

They further explain the value of an employee to the firm as "the present value of the difference between wage and marginal revenue productⁿ. An employee's value derives from the ability of the firm to pay less than the marginal revenue product. Thus, it involves measuring the costs incurred by business firms and other organisations to recruit, select, hire, train and develop human resources. It also involves measuring economic value of people to organisations. In short, they intend to make it clear that the **term** 'human resource' recognises people who form organisational resources.

To quote **Davidson**, "Human resource accounting in the measurement of the cost and **value** is a term used to describe a variety of proposals that seek to report and emphasise the importance of human resources knowledgeable, trained and loyal employees in a company's earning process and total 'assets'".

In the words of **R.L. Woodruff Jr.**, Vice President, R.G. Barry Corporation, the company which undertook pioneering work (1960s) in developing human resource accounting - "human **resource** accounting is an attempt to identify and report investment made in resources of the organisation that are not presently accounted for under conventional accounting practice". Woodruff further considers it to be an information system that tells management what changes over time are occurring to the **human** resources of the business.

In the foregoing definitions one may not find unanimity on what **human** resource accounting is yet what is emphasised upon by all is **the significance of information**. **Human Resource Accounting System requires and produces a great deal of information for an organisation.**

5.3 HUMAN RESOURCE ACCOUNTING: OBJECTIVES IN RELATION TO THE PROCESS OF HUMAN RESOURCE MANAGEMENT

You have been told in previous Section that Human Resource Accounting is a tool designed to assist in the effective and efficient use of management of human resources. Let us now consider the managerial role of human resource accounting in its totality through Figure I which clearly shows that Human Resource Management is a system designed to convert human resource inputs into outputs in terms of human services.

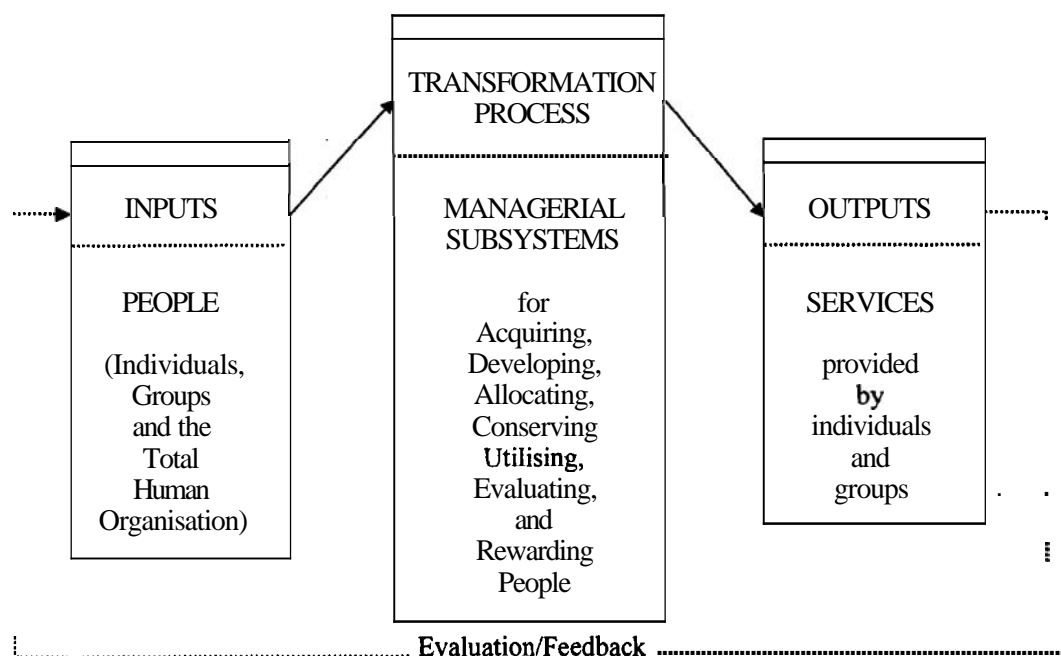


Figure I: "Raw" Wuman transformed into Valuable Wuman Output

The inputs are people: individuals, groups and the total human organisation. The transformation process involves the managerial sub-systems in use for acquiring, developing, allocating, **conserving**, utilising, evaluating and rewarding people working for any organisation. The outputs in the process are the services provided by individuals and groups. In other words, the model "transforms" "raw" human resources into valuable human services. Now let us briefly examine each sub-system: what, it covers and its enabling features.

Sl. No.	Sub-system in the transformation process	What it Includes	Enabling Features
1)	Acquisition of Human Resources	Recruiting Selecting Hiring	Forecasting manpower requirements, Selection Procedure, Cost estimation and Manpower budgets. Provides non-monetary surrogate measures in order to test management potential while choosing the person possessing the greatest future value to the organisation.

Sl. No.	Sub-system in the transformation process	What it includes	Enabling Features
2)	Development of Human Resources	Training to enhance technical, intellectual and administrative skills	Facilitates decisions involving the allocation of resources by measuring the expected rate of return in proposed investments in training.
<p>(Human resource accounting information can greatly influence the acquisition and development of policy for human resources in more than one way, such as:</p> <ul style="list-style-type: none"> ❖ review of budget proposals, ❖ employment decisions with regard to <ul style="list-style-type: none"> • level of entry • outside experience • extent of training ❖ provide estimates of historical and current costs in order to help management <ul style="list-style-type: none"> • assess trade offs between the costs of recruitment from outside or development from within.) 			
3)	Allocation of Human Resources	Assigning people to various organisational tasks and roles	Helps management to allocate people to jobs in a way that will optimize job productivity, human resource development and individual satisfaction.
4)	Conservation of Human Resources	Maintaining Mechanical capabilities of individuals and functional effectiveness of management teams.	Provides early warning signals to suggest the need for special attention to conservation and prevent their depletion.
5)	Utilisation of Human Resources	Process of using human services to achieve organisational objectives	Provides a unifying framework to help managers utilise human resource effectively and efficiently. It makes managers think of strategies designed to influence the value of people.
6)	Evaluation and Reward of Human Resource	Assessing the value of people to an organisation with respect to performance and their promotability	Helps human resource evaluation process by developing valid and reliable methods of measuring the value of people to the organisation. Rewards include compensation, promotion and symbolic 'rewards'. The sub-system enables administration of organisational rewards in relation to a person's value to the organisation.

To conclude, from a managerial perspective, human resource accounting can be seen as a way of thinking for the management of an organisation's human resources. It is based on the notion that people are valuable organisational resources. Another aim of human resource accounting is to inform the investors about an organisation's human assets. It may be noted that current financial accounting practice treats all expenditures for investment in human resource as 'expenses' rather than as 'assets'. This convention results in a distorted measure of an organisation's return on investment. Therefore, it does not offer a clear picture to the **investor** who attempts to value an organisation's human resource on this basis alone. Nevertheless, the point is established that human resource accounting does have a potential role for management and investors. Figure II presents a model which contemplates the aims and objectives of human resource accounting.

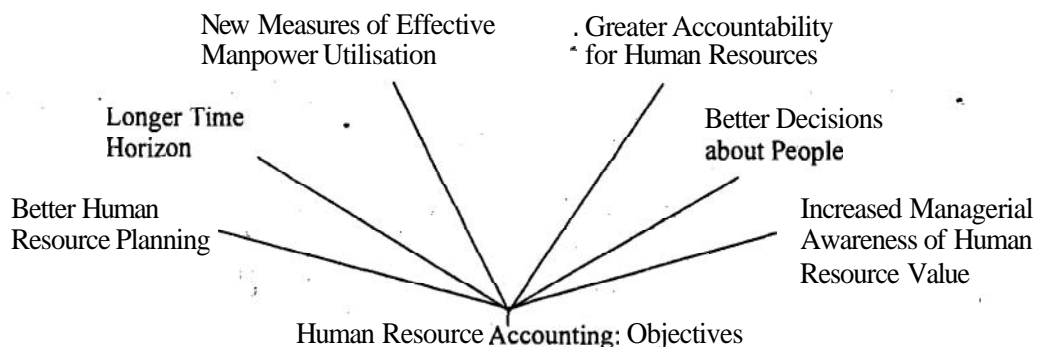


Figure II: Objectives of Human Resource Accounting

To conclude, we can say that human resource accounting aims at: (1) increased managerial awareness of the values of human resources, (2) better decisions about people, based on improved information systems, (3) greater accountability on the part of management for its human resources, (4) developing new measures of effective manpower utilisation, (5) enabling a longer time horizon for planning and budgeting, and (6) better human resource planning.

5.4 INFORMATION AS A KEY FACTOR FOR HRA IN HOSPITALITY

Let us consider an example. One hotel chain is operating through its several regional offices, numerous branches and employing a sizeable field work force. During the review of its operations it is confronted with the following 'reported' problems concerning the planning and effective utilisation of its manpower:

Nature of the problem	Basis of report
1) High turnover among its field operatives (over the counter personnel)	General impression (no data available)
2) Rising administrative cost: the personnel costs accounting for a very high component.	Based on opinion
3) Lack of attention on the part of managers towards developing their people.	Viewed as apparent Only one or two branches monopolised in offering promotable manpower causing heartburning amongst the remaining branches.

A close look at these problems through an outside consultant brings out three basic lacunae in the organisation system:

- a) absence of a measure of planning of manpower beyond a short-term (one year),
- b) obvious lack of information about the firm's manpower, and
- c) absence of a position of senior executive in the corporate office for overseeing and coordinating various human resource activities and effective utilisation of the company's manpower.

The criticality of (b) can be easily understood because without reliable system of **information**, effective planning and control is just not possible.

The **primary** purpose of human resource **accounting** is to help management plan and **control** the use of human resources effectively, and efficiently. For this, it must require a **great** deal of information that can serve the management, the investors and other outside agencies. Basically, the information it involves is **for measuring** the costs incurred by **business** firms and other organisations to recruit, select, hire, train and develop human **assets**, besides **measuring** the economic value of people to the organisation.

In the example given above, the hotel chain identified the following kinds of information and their use:

Information Needs in Human Resource Accounting	
Kind of information	Purpose of information
1) Information for Human Resource Planning	To facilitate manpower planning To gather data on actual costs of recruitment and selection, training, etc. Collection of figures over the past period provide reasonable basis for projecting future expenses.
2) Information for control of personnel costs	To provide reasonable means of evaluating the performance of management in controlling costs, The information helps develop a system of standard costs for personnel recruitment, selection and training. That would help further in analysing costs.
3) Information for control of turnover costs	To increase management's awareness of the costs of turnover and to devise steps to control it.
4) Information for evaluation of management effectiveness	To increase the accountability of management in providing measurements those were effective in developing and utilising people over a longer period of time.
5) Information for the Board and Stockholders	To keep the top management abreast of changes in the organisation's investment in people and human resource value. To help the top management, in deciding on information on the firm's investment in human resource to investors even though the data remains unaudited .

The above illustration provides a synoptic view of the elements of information required to consider various problems related to the effective and efficient utilisation of human resources in the organisation. It also illuminates the point that the need for human resource accounting information arises **from** the specific felt needs of a hotel or hotel chains.

5.5 HUMAN RESOURCE COSTS: CONCEPTS AND METHODS OF MEASUREMENT

Before we consider cost measurements through human resource accounting, let us take a look at some of the terms used in **the** accounting concept of 'cost'.

Some Definitions

- 1) **Cost** : A sacrifice incurred to obtain some anticipated benefit or service. Conceptually, all costs have "expense" and "asset" components.
- 2) **Original Cost** : The sacrifice that **was** actually incurred to acquire or obtain a resource. Original cost is also termed "historical **cost**".
- 3) **Replacement Cost** : The sacrifice that must be incurred to replace a resource' presently owned or employed.
- 4) **Outlay Cost** : The actual cash expenditure that must be incurred to acquire or replace a **resource**.
- 5) **Direct Costs** : Costs which can be directly traced to **an** activity, product or resource.
- 6) **Indirect Costs** : Costs that cannot be traced directly to a specific activity, product or activity process, but which are incurred for **general use in more than one activity, etc.**

- 7) **Actual Costs** : Costs actually incurred to attain some specified end.
- 8) **Standard Costs** : Costs that ought to be incurred to attain some specified end under certain pre-defined conditions.
- 9) **Opportunity Costs** : The income or revenue foregone or sacrificed in order to acquire or replace a resource.

The several accounting concepts related to costs defined above have significant applications in human resource accounting. The concept of human resource cost has its roots in the general concept of cost. Human resource costs are costs incurred to acquire or replace people. Like other costs, they have expense and asset components. Similarly, other descriptions of costs, viz., outlay and opportunity costs, direct and indirect costs, actual and standard costs – all fit into the costs framework of human resource accounting.

One can measure costs through human resource accounting in two ways: (1) the original or historical cost of human resources, and (2) the replacement costs of human resources.

i) **The concept of original cost**

The original cost of human resources may be defined as the sacrifice that was actually incurred to acquire and develop or replace people. It includes costs of:

- recruitment,
- selection,
- hiring,
- placement,
- orientation, and
- on-the-job training.

It has elements of direct costs as well as indirect costs. For example, a trainee's salary is a direct cost, while the time spent by the supervisor or other employees during training contributes to the indirect cost. For managerial uses of the cost data, it is desirable to include the **opportunity** costs incurred in the original costs of human resources. However, since the reliability of the opportunity costs can always be questioned, it should not form part of reporting to investors and external users.

Measurement of Original Cost of Human Resources

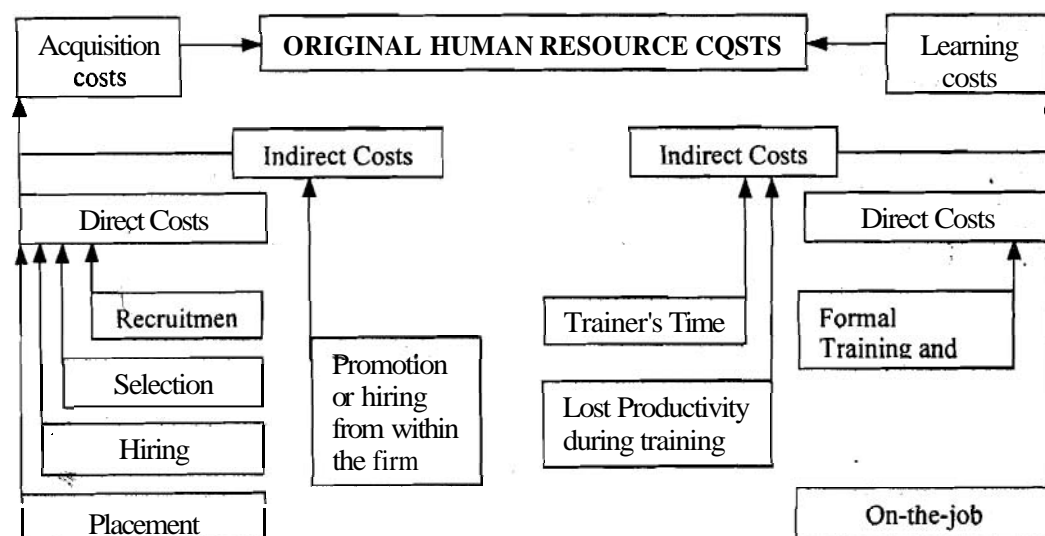


Figure III: Measurement for Original Human Resource Costs: A Model

(Figure III and IV are adaptations from Eric G. Flamholtz, "Human Resource Accounting: Measuring Positional Replacement Costs", Human Resource Management, Spring 1973)

The definition of original cost of human resources refers to the sacrifice that would have to be incurred to acquire and develop people. This means that **any attempt for measurement of original human resource costs essentially requires measurement of acquisition costs and training costs.** These costs will include both direct costs and indirect costs of acquiring and developing human resources. **Figure III** presents a model for the measurement of original human resource costs.

ii) **Replacement cost of human resources**

The Replacement Cost of Human Resources may be defined as the sacrifice that would have to be incurred today to replace human resources presently employed. It includes the costs attributable to the turnover of a present employee as well as the cost of acquiring and developing the replacement. From individuals, the scope can be extended to include the groups of individuals and the human organisation as a whole. Replacement refers to acquiring a substitute capable of rendering an equivalent set of services for a single specified position, meaning thereby that the context is the positional replacement.

There is another notion of replacement cost: **personal replacement cost.** It refers to the sacrifice that would have to be incurred today to replace a person presently employed with a substitute capable of rendering an equivalent set of services in all the position the former might occupy. Here the context is the person, and the replacement cost is the cost of replacing a set of services provided by one person with an equivalent set of services to be provided by another:

Measurement of replacement

The context of replacement cost measurement can be positional as well as personal.

There are three basic components of positional replacement cost: (1) **acquisition costs**, (2) **learning costs**, and (3) **separation costs.** While the first two components have been reflected in the earlier model, the separation costs refer to the costs incurred as a result of a position holder leaving an organisation. It may have both direct and indirect components and may include such costs as (i) cost of a vacant position while search for replacement is on, (ii) opportunity cost because of loss of services, and (iii) cost of lost productivity prior to the separation of an individual from the organisation if such tendencies were apparent.

Figure IV presents a model for measurement of human resources replacement costs (positional replacement cost).

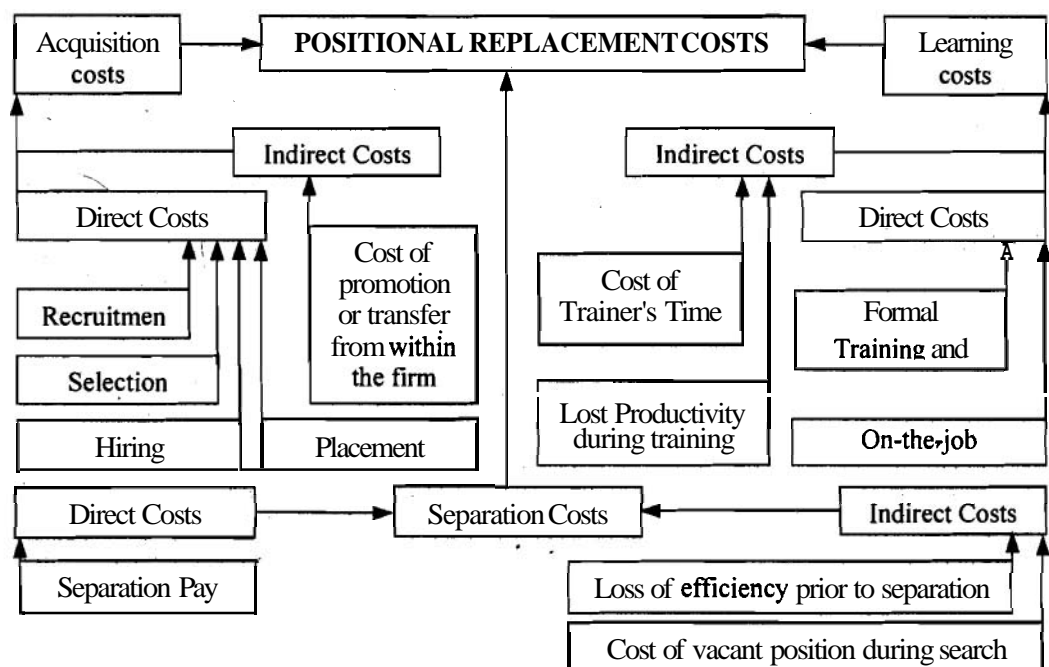


Figure IV: Measurement for Promotional Replacement Costs: A Model

iii) Personal replacement cost

The concept of personal replacement cost refers to the sacrifice that would have to be incurred today to replace a person with a substitute capable of providing a set of services equivalent to the individual being replaced. The notion refers to the cost of replacing a person with a functionally equivalent substitute rather than the cost of replacing him with the best available substitute. The notion of **personal replacement cost** is quite similar to the concept of economic value.

5.6 HUMAN RESOURCE VALUATION: CONCEPT AND DETERMINANTS OF VALUE

One of the major objectives of human resource accounting is to develop reliable measures of effective manpower utilisation. Both monetary and non-monetary measures are needed for use in (1) decision making involving the acquisition, development and allocation of human resources, and (2) monitoring and evaluating the degree to which the management has effectively and efficiently utilised the human resources. For further conceptual clarity, one may look at some of the terms used in the context of human resource value with their simple definitions:

Some Definitions:

- 1) **Value:** The present worth of the services of an employee is anticipated to render in the future.
- 2) **Value of human organisation:** The present worth of its expected future services to an enterprise.
- 3) **Individual's value to an organisation:** The present worth of the set of future services a person is expected to provide during the period he or she is anticipated to remain in the organisation.
- 4) **Group's value to an organisation:** The present value of its expected future services.
- 5) **Individual's expected conditional value:** The amount the organisation could potentially realise from his or her services if he or she maintains organisational membership during the period of his or her productive service life.
- 6) **Individual's expected realisable value:** The amount actually expected to be derived, taking into account the person's likelihood of turnover.
- 7) **Productivity:** The set of services an individual is expected to provide while occupying his or her present position.
- 8) **Promotability:** The set of services the individual is expected to provide if and when he or she occupies higher-level positions in his or her present or different promotion channels.
- 9) **Individual skills:** The currently developed potential of an individual to provide services to the organisation.
- 10) **Rewards:** The benefits derived by the system.
- 11) **Instrumental individual rewards:** Rewards which are administered in relation to individual effort.
- 12) **Instrumental system rewards:** Rewards which accrue by virtue of membership in the system.
- 13) **Activation level:** The neuropsychological counterpart of the notion of motivation.

- 14) **Human resource valuation:** The process of assessing the value of people to an organisation. It involves measuring the productivity and promotability of people.
- 15) **Casual variables:** Independent variables that can be directly or purposely altered by the organisation and its management.
- 16) **Goal emphasis:** Behaviour that stimulates an enthusiasm for meeting the group's goal or achieving excellent performance.
- 17) **Intervening variables:** Variables that reflect the internal state, health and performance capabilities of an organisation.
- 18) **Managerial behaviour:** The dimensions of supervisory behaviour effecting influencing group effectiveness.
- 19) **Organisation structure:** The structural relationship among organisation roles.
- 20) **Peer group behaviour:** The support, interaction, facilitation, work facilitation, and goal emphasis provided by the subordinate peer group.
- 21) **Support:** Behaviour that enhances someone else's feeling of personal worth and importance.
- 22) **Team Building:** Behaviour that encourages members of the group to develop close, mutually satisfying relationship.
- 23) **Work facilitation:** Behaviour that helps achieve goal attainment.
- 24) **End-result variables:** Dependent variables that reflect the results achieved by an organisation.

What is human resource value?

The concept of human resource value is derived from the economic concept of value. The economic concept of value has two dimensions:

- 1) Utility, i.e., value in use, and
- 2) Purchasing power, i.e., exchange value.

Value is the present worth of the services an object is anticipated to render in the future. Thus, if an object has no future use, it has no value.

Similarly, **human resource value is the present worth of people's expected future services.** The concept can be applied to individuals, groups, and the total human organisation.

In the preceding definitions we have noted that an individual's value to an organisation is the present worth of the set of future services he or she is expected to provide during the period he or she is **anticipated** to remain in the organisation.

What determines the individual's value?

Unlike other resources, human beings cannot be 'purchased' or owned by organisations, and hence are relatively free to either serve or turnover. From the organisation's viewpoint, this suggests a dual aspect to an individual's value: one aspect is the amount that organisation could potentially **realise** from his or her services if he or she stays with **the organisation (maintaining organisational membership) during the period of his or her productive service life, and the other aspect refers to the amount actually expected to be derived, taking into account the person's likelihood** of turnover.

Two models of the determinants of human resource value are relevant here: one by **Flamholtz** that identifies the **determinants** of individual value and the **other** by **Likert** that explains the determinants of group value.

According to **Flamholtz's** model, the ultimate measure of a person's value is expected realisable value. This comprises of two variables: **conditional value** (potential value) and the **probability that the person will remain with the firm during his or her expected service life**, as is shown in **Figure V**.

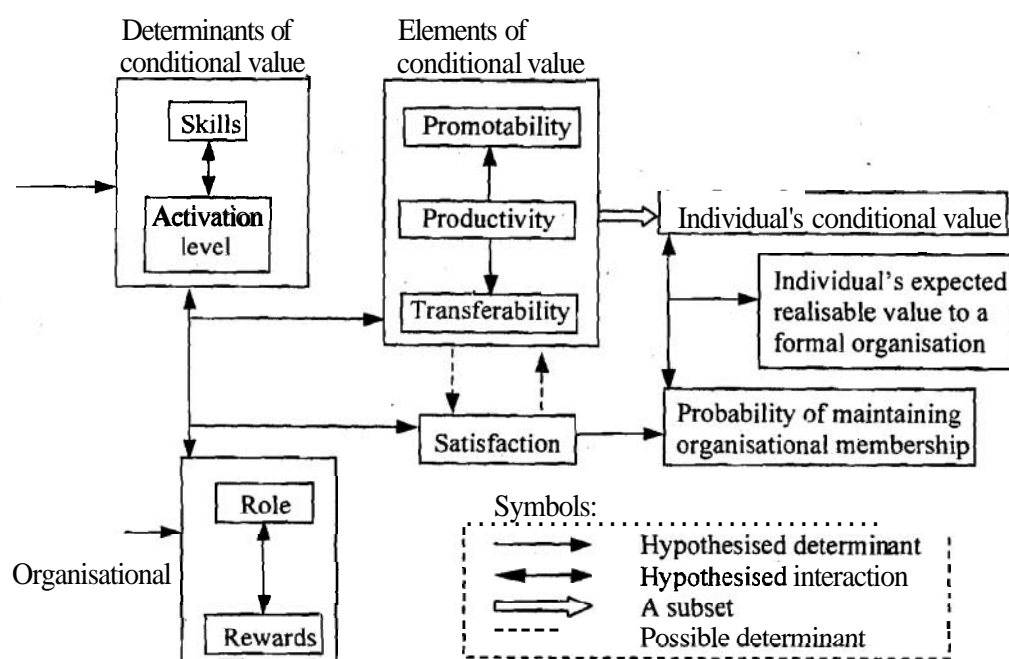


Figure V: **Flamholtz's** Model of Determinants of an Individual's Value to Formal Organisation

It is evident from this figure that the conditional value of a person depends upon both the skills and the activation level that ultimately leads to his or her promotability, transferability and productivity. The organisational determinants of a person's conditional value include the degree to which the role assignment corresponds with the employee's skills and personal goals, and the reward system used by the firm. Then, the probability of a person staying in an organisation (maintaining organisational membership) is directly related to the degree of job satisfaction that the employee feels.

The Likert and Bowers Model: Highlights causal, intervening and end-result variables affecting the group's value to an organisation. **Causal variables** are those which are controllable by the organisation, while **intervening variables** reflect organisational capabilities. Both these variables determine the end-result variables of the organisation.

The end-result, dependent variables get their reflection in the achievements of the organisation or the total productive efficiency in terms of sales, costs, earnings, market performance, etc. Each of these models identifies variables that determine the value of people to organisations. These variables must be taken into account in measuring the value of people as organisational resources, as we move on further, to consider human resource valuation methods.

5.7 HUMAN RESOURCE VALUE: MONETARY AND NON-MONETARY MEASUREMENTS

Monetary and non-monetary measurements of human resource value are needed in order to translate manpower resources into a common denominator on which many organisational decisions are based. These decisions pertain to individuals, groups, and the total human organisation. For this purpose, different methods of valuation are needed because each of these aggregations of human resources is a distinct unit of organisational decision-making.

1) Monetary Measurements

The main aspects of a person's value to an organisation are:

- i) Expected conditional value, and
- ii) Expected realisable value.

We have noted that the main aspects of a person's value to an organisation are the expected conditional value and expected realisable value. In the direct approach, there is an attempt to derive a direct or principal measure of a person's value. The indirect approach involves application of various possible surrogates or proxy measures of economic value in order to obtain measures of expected conditional and expected realisable value.

Flamboltz's Stochastic Rewards Valuation Model based on the assumption that an individual generates work value as he or she occupies and moves along organisation roles and renders service to the enterprise. The model presupposes that a person will move **from** one state (role) of the system (organisation) to any other state during a specified time period. Exit also is considered a state in this model.

In order to follow the model, the following steps are necessary:

Step 1	Define the mutually exclusive set of "states" and individual may occupy in the system.
Step 2	Determine the value of each state to the organisation.
Step 3	Estimate a person's expected tenure in the organisation .
Step 4	Find the probability that the person will occupy each possible state at specified future times.

In principle, a person's expected conditional value and expected realisable value can be equal, **provided** the person is certain to remain in **the** organisation in the predefined set of states throughout his or her expected service life. However, the basic problem in **applying this** model in actual organisation is the difficulty of obtaining valid and reliable data inputs of (1) the value of a service state, (2) the individual's expected tenure, and (3) the probabilities of occupying each defined state at specified times - although **Flamboltz** continues to explore the various possibilities of measuring these dimensions.

There are a number of other valuation models which have been developed over the past two decades and more. We will consider some of these here. The methods suggested throw considerable light on the possible approaches to the problems of human resource valuation.

A) Lev and Schwartz's Present Value of Future Earnings Model

Lev and Schwartz model is based on the economic concept of recognising humans as wealth-providing sources of income, and relies on measurement of such wealth as a present value of future income streams. The exercise involves (1) classification of employees into homogenous group profiles, (2) estimation of earnings for each such group, and (3) calculation of the present value of earnings of each group, using an appropriate discounting rate. Thus, the discounted future expected income stream **represents the** present value of services.

The model has some limitations: **Firstly**, it ignores the **possibility of the individual** making exit from the organisation for reasons other than death, and **secondly**, it ignores the likelihood of role changes beyond one's normal career channel. Further, by simply aggregating individuals into groups on the basis of age, qualification, etc. is no guarantee of aggregate measures in value because of synergism.

B) Hermanson's Adjusted Discounted Future Wages Model

In this method the approach is to adjust the discounted future salary wage payments to people by performance efficiency factor (which is a ratio based on the return on

investment derived by the specified firm relative to all other firms in the economy for a specified period). Apparently, compensation measures, such as, salary are considered potentially useful to develop a surrogate valuation model. However, in reality they may not necessarily bear a significant relation either to an individual's value or to his or her current productivity. There are several other limitations, such as, organisational compensation policy, wage and salary structure, influence of unions which may not accurately reflect the individual value.

C) Hekimian and Jones Competitive Bidding Model

In this model **Hekimian and Jones** propose a method whereby the concept of opportunity cost is applied by establishing an internal labour market within the organisation through the process of competitive bidding. Under this approach, all managers will be encouraged to bid for any scarce employee they want and the one who is able to acquire his or her services put the bid price as his or her investment base in respect of that employee. However, this method also has problem of valuation, such as, to the adoption of a procedure by a manager to decide the amount of bid.

In a review of the several methods discussed above, **Flamholtz** observes that it is not sufficient to assert that the various methods bear an identity or close correspondence between the true unknown economic value of individuals or surrogate measures. Nevertheless, according to Flamholtz "at best these assertions should be reviewed as testable hypotheses" pointing to the need of validation through further research.

Monetary Measurements: Valuation of Groups

Earlier, the point has been mentioned that the value of a group may not be equal to the values of the individuals comprising the group. Mainly, the differential is attributed to synergism. It is not valid merely to apply methods for individual valuation to group valuation, and vice versa. Hence, the need to develop methods for the valuation of groups per se.

In organisations, there are several types of groups. For example, one classification is departments, plants, divisions, levels, or just work groups. Another way of grouping is based on the consideration whether the group comprises an expense centre or a profit centre.

Human Organisational Dimensions Method

Based on the **Likert-Bowers** model of group's value to an organisation discussed earlier, the method follows the assumptions on relationship among causal, intervening and end-result variables. The assumptions are that the causal variables influence the intervening variables, which in turn determine the organisation's end-result variables. According to **Likert**, changes in the key dimensions in the human organisation are considered to be dependable indicators for forecasting changes in the productivity and financial performance of an organisational unit that the human organisation will be able to sustain over substantial periods of time. Moreover, when changes in the human organisational dimensions occur, predictions can be made of the magnitude of changes that will occur subsequently in the output performance of that human organisation.

Flamholtz proposes three methods for valuation of expense centre groups using surrogate measures for their valuation:

- i) Capitalisation of Compensation,
- ii) Replacement Cost Valuation, and
- iii) Original Cost Valuation.

2) Non-Monetary Measurements

Although accounting has conventionally used money as its basic unit of measurement, **American Accounting Association's Committee** has recently suggested that there

no reason why money alone should be the unit of measurement used in accounting. (The committee stated that "there is also no reason why the only measure applied should be 'value' in terms of dollars.) It is entirely conceivable that accounting should deal with various measures and do so in a systematic form, say, "a sector or number of measures". The committee for the first time conceded that the future scope of accounting was likely to include **non-monetary** as well as monetary measures.

In human resource accounting, non-monetary measures of human resource value have significant uses. **Firstly**, they may be used **for decisions** that do not require monetary measurements – such as, layoff decisions. **Secondly**, non-monetary measures may also be used **as surrogates** for monetary measures. For example, a ranking of people according to their conditional value may be used as a surrogate for the monetary measurement of conditional value. **Thirdly**, non-monetary measures may be used **to predict monetary measures**. Hence, the importance to develop valid and reliable non-monetary methods of measuring human resource value is gaining ground.

For non-monetary measurements, we may revert to **Flamholtz's** model to consider the methods of measuring each determinant of an individual's value to human organisations. We referred to the terms expected realisable value and conditional realisable value. **Expected realisable value** and **conditional value** can be measured by ranking methods. The probability of maintaining membership can be measured by actuarial and subjective probabilities. The elements of **conditional value** (productivity, transferability and profitability) can be measured by personnel research and appraisal methods as well as by certain objective measures. **Productivity** corresponds to measures of **performance** and it can be measured by performance objective indices and by management appraisal. **Promotability** and **transferability** can be measured in terms of the measures of potential, such as, psychometric tests and subjective assessments. **Satisfaction** can be measured by attitude surveys. **Skills** can be measured by a capability inventory and motivation can be measured by an attitude questionnaire. A person's **role** can be measured by job analysis, while **rewards** can be measured through attitude surveys.

All of the variables contained in the **Likert-Bowers** model of the determinants of a group's value can be measured by the "survey of organisations", an attitude questionnaire. **Taylor and Bowers** have conducted tests of the predictive validity and the internal consistency reliability of this measurement instrument. Their findings led to reconceptualisation of an earlier version of the **Likert-Bowers** model and provide a foundation for the development of non-monetary measurements of a group's value to an organisation.

5.8 DEVELOPING A HUMAN RESOURCE ACCOUNTING SYSTEM: SOME DESIGN CONSIDERATIONS

The design and implementation of human resource accounting system is a matter of individual organisational capability and its perception of accounting and objectives of developing a framework for the accounting of the human resources. While one firm may draw satisfaction with the most rudimentary system, the other organisation may feel the need for much more advanced capability. Similarly, the **appropriateness and** validity of a certain human resource accounting capability may render itself less appropriate and not valid with the changed conditions, both inside and outside the organisation.

Flamholtz suggests five human resource accounting systems by type of capability represented by systems I, II, III, IV and V. Similarly, five functions of human resources management, **viz.**, human resource planning, human resource decision making, conservation, evaluation and management efficiency: control are listed. These are arranged in a matrix form (**Figure VI**) to indicate the human resource accounting capabilities provided by each system level:

	System I	System II	System III	System IV	System V
Human Resource Management Functions	Prerequisite Personnel system	Basic HRA system	Intermediate HRA system	Advanced HRA system	Total HRA system
I					
Human Resource Planning	Manpower skills inventory Replacement tables	Estimated costs of selection, recruitment, training, etc. Simulations	Replacement wsts	Standard and actual personnel costs Stochastic manpower mobility models Manpower	Stochastic rewards valuation model HR value simulation
II					
Human Resource Decision making:					
A. Budgetary	Personnel costs included in "General and Administrative" expenses	Personnel costs budgeted separately	Budgetary system for recruitment, training, etc. Budget replacement costs	Budget Standard and actual costs Original and replacement costs	Human Capital budgeting Budget ROI on human capital investment.
B. Policy	Traditional selection, training and placement methods	Value-oriented selection decisions	Recruitment vs. training trade off analysis	Manpower assignment optimization models	Value-based compensation
III					
Human Resource conservation:					
A. After-the-fact	Turnover rates	Turnover cost	Replacement cost	Opportunity cost	HR Value depletion
B. Before-The-fact	n.a.	Attitudinal data	Expected Turnover cost	Expected Opportunity costs HR accountability	Expected conditional and realisable value depletion
IV					
Human Resource Evaluation	Performance and potential ratings	Perceived value rankings	Performance predictions of potential value interval scaling of value	Measurements of economic value of groups	Measurement of economic value of individuals
V					
Human Resource Management Efficiency control	n.a.	Comparison of actual costs with historical costs	Comparison of budgeted and actual costs Variance analysis	Comparison of actual costs against standard Variance analysis	Inter-unit comparison of costs

Figure VI: Capability provided by HRA system I to V

From the above matrix it would be seen that at the two extremes, there is System I which consists of nominal but very elementary human resource accounting capability. At the other end, there is System V which constitutes the total HRA system, representing the maximal human resource accounting capability.

These five systems can be taken as five levels and five stages of developing human resource accounting capabilities. A firm may presently be in the first stage of human resource accounting capability and desire to reach the fifth stage. Now depending upon its own circumstances, it may be quite rational to 'move from stage to stage to incrementally increase the firm's capability or alternately, to choose a higher system IV or V. However, this will depend on the following factors:

- i) **Type of organisation:** There are three main criteria which influence the type of organisation:
 - 1) The degree of human capital intensiveness. For example, hospitals, establishments are highly people intensive and, therefore, likely to lead to account for human resources.
 - 2) The number of highly educated or skilled personnel required in hotels or related services, individually as well as in groups.
 - 3) The number of people occupying similar positions, i.e., each performing virtually similar functions. For example, chefs in hotels. Large numbers provide a basis for comparability and of performance and potential as well as data for purposes of **analysis**.
- ii) **Size and structure of organisation:** A small organisation may not need at all a formalised human resource accounting system because the management's personal knowledge of operations. However, the larger the organisation, the larger is its need for human resource accounting. Here, the human resource accounting system must be designed as a subsystem to the overall management information system.
- iii) **Existing Human Resource Accounting capability:** We have already noted from the matrix (**Figure VI**) that an organisations PERSONNEL SYSTEMS and human resource capability will also influence the choice of a human resource accounting system. For example, an organisation with a computerised human resource information system can be expected to develop System V capability with much ease than an organisation with inadequate personnel system.
- iv) **Potential for Developing HR Accounting:** Much of the potential for developing human resource accounting capability will be judged from the **fact** of availability of and accessibility to the required data. In some organisations, particularly in service organisations, such as, hospitality or tourism, being labour intensive, most of the data is available as a routine aspect of business operations, even though it might lack the advanced capabilities. In other organisations, where some or all the required data is not available, the potential for developing human resource accounting is to intermediate (System **III**) capability. Exceptionally, an **organisation** may wish to move directly from minimal to advanced human resource accounting capability.

5.9 PHASES IN THE DESIGN AND IMPLEMENTATION OF A HUMAN RESOURCE ACCOUNTING SYSTEM

We have noted earlier that different organisations require different degrees of human resource accounting capability. **Flambholtz's** Systems I to V are not all embracing or standards to match a specific organisation's human resource accounting needs. Instead, in each case, an appropriate system will have to be tailor made to a firm's particular needs. There are five phases in the design and implementation of human resource accounting system:

- 1) Identifying human resource accounting objectives,
- 2) Developing human resource accounting measurements,

- 3) Developing a data base for the system,
 - 4) Pilot testing the system for validity, and
 - 5) Implementing the system.
- 1) **HR Accounting Objectives:** The objectives of the human resource accounting system should basically stem from the management's requirements from human resource information. These requirements must be defined explicitly. As a part of the detailed study and analysis of the organisation's human resource management process, each organisational unit should be responsible for human resource management, **should define its functions, indicate the kinds of decisions made, their relative frequency and information needed to make those decisions.** These information needs must be analysed in relation to the present information flow and the new information to be developed **must** be made specific. Once this analysis is done, the basis of the human resource accounting system in terms of its scope and objectives can be defined. The objective may be a total HRA system, a problem oriented system, a partial system, such as, a budgeting system for human resource costs, or setting of standard costs.
 - 2) **Developing Human Resource Accounting Measurements:** The first step is to select the types of HRA measurements desired. The choice needs to be exercised between: (a) single measurement or a set of measurements, (b) monetary or non-monetary measurements, and (c) measurements of costs or value, or both. In the next step, before these measurements selected can be translated into **useable** forms, their validity and reliability must be tested.
 - 3) **Developing Human Resource Accounting Database:** The inputs required for human resource accounting constitute the database. These include cost data, time sheets, psychological measurements, etc. In typical cases, it will become necessary to restructure the organisation's accounting classification with a **view** to ensuring that all personnel related costs are classified separately. Otherwise these cost elements are 'buried' covered in one single **classification** "administration and general expenses". The accounting classification should be organised in relation to responsibility centres, such as, **recruitment**, training, **management** development, etc. In addition to restructuring the accounting classification, **the database** must also include non-financial information, such as, employee attitude survey feedback as a standard ongoing basis. Similarly, the probabilistic estimates of employee mobility compiled in the human resource planning process must be taken into account for measuring human resource value.
 - 4) **Pilot Testing the System:** After the objectives have **been defined**, measurements developed, and necessary database is made **available**, the next **step** is to pilot test the system. Care should be taken that the test is not **influenced** by extraneous problems and that the management's support and cooperation is available throughout the processes of design and development of the system. In the light of the feedback **from** pilot testing, the system should be **reviewed** for its utility, efficiency, cost, etc. aspects and suitability modified, if considered necessary.
 - 5) **Implementing the Human Resource Accounting System:** The final phase is the implementation process. It involves essentially, standardising the input output documents, forms, etc., and familiarising the personnel with the new system. Staff orientation as to the uses, purposes, uses and methods is a key activity in order to operationalise the human resource accounting system without many hassles.

Any system, over a period of time, may become out of step either because of inherent constraints or changes in the management needs. A continuing review would make the system more responsive to the changing needs, and modifications required would be easy to **carry** out either by simple **adjustments** in the existing system or by following the **design and implementation process, if need be.**

Check Your Progress

1) What is human resource accounting? Discuss with reference to a few definitions of human resource accounting.

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2) What is cost? Define the following concepts of cost:

- a) Original cost b) Replacement cost c) Outlay cost
- d) Opportunity cost e) **Standard cost**

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3) What is the original cost of Human Resources and its major components?

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4) What is value? Define the following terms used, in the context of human resource value:

- i) Individual's value to an organisation.
- ii) Groups value to an organisation.
- iii) **Individual's expected realisable value.**
- iv) Peer Group Behaviour.
- v) End Result Variables.

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5) What are the methods for valuation of expense centre groups?

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6) Describe the phases in the design and implementation of a Human Resource Accounting System.

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5.10 LET US SUM UP

Human Resource Accounting provides another type of information that holds promise for the evaluation of human resource management and in turn assists in human resource planning policies and practices which invest in effective utilisation of these resources. Human resource accounting places value on the human assets of the **firm**, which means accounting for an organisation's employees among its other resources, measuring both the cost and the value of the personnel. In other words, it involves accounting for investment in people and their replacement costs, as well as accounting for the economic values of people to an organisation. Several models and methods for developing measures in monetary and non-monetary terms were discussed in the Unit.

However, there seems to be diversity in suggested ways of measuring the investments. **HRA** concept is well theorised, but still there are many questions remaining unanswered, and the practical problems of gathering data and reliable measures of costs and values have been overwhelming. Further, human assets are outside the concept of "ownership" and so far there are no clear-cut methods to measuring the "changing **characteristic**" of human resources, in a wholly convincing way. Nevertheless, much of the value of human resource accounting lies in encouraging managers to consider investments in manpower planning in a more positive way. As management the **HRA** concept itself, represents a new way of thinking **about** people as assets. It has a great **potential** for future research in the hospitality sources.

5.11 KEY WORDS

- Investment Approach** : denotes policy of treating certain human resource costs as an investment to be depreciated during an employee's expected employment.
- Humanistic Values** : refers to positive beliefs about the potential and desire for growth among employees.
- Incremental Values** : indicates almost limitless values that are created by a **positive organisational** climate.
- Organisational Climate** : refers to human environment within which an organisation's employees work.
- Organisational Climate Approach** : necessitates use of periodic surveys to determine ways in which the organisational climate has improved or deteriorated.

5.11 CLUES TO ANSWERS

Check Your Progress

- 1) Human Resource Accounting may be defined as the measurement and **reporting** of the cost and value of **people** as organisational resources. It involves **accounting** for investment in people and their replacement costs as well as accounting for the economic values of people to an organisation. Read **Sec. 5.2** and answer in detail.
- 2) Cost is a sacrifice incurred to obtain some anticipated benefit or service. Conceptually, all costs have "**expense**" and "asset" component. See **Sec. 5.5** to find the definition of the various concepts of costs.

- 3) The original **cost** of human resources refers to the sacrifice that would have to be incurred to acquire and develop people. This means that any attempt for measurement of original **human** costs essentially requires measurement of acquisition costs and training costs. These costs will include both direct costs and indirect costs of acquiring and developing human resources. See **Sec. 5.5** to check out the figure of the model of Measurement for Original Human Resource Costs.
- 4) Value is the present worth of the **services** an employee is anticipated to render in the **future**. Read **Sec. 5.6** to find the definition of the related terms.
- 5) **Flamholtz** proposes three methods for valuation of expense centre groups using surrogate measures for their valuation:
 - i) Capitalisation of Compensation,
 - ii) Replacement Cost Valuation, and
 - iii) Original Cost Valuation.See **Sec. 5.7** to learn about them in detail.
- 6) There are five phases in the design and implementation of human resource accounting system. They are:
 - i) **Identifying** human resource accounting objectives,
 - ii) Developing human resource accounting measurements,
 - iii) Developing a data **base** for the system,
 - iv) Pilot testing the system for validity, and
 - v) Implementing the system.See **Sec. 5.10** and expand the above answer.