IBPS - SO

SAMPLE THEORY

- **COMPOUND INTEREST**
- **SEATING ARRANGEMENTS**
- **IDIOMS AND PHRASES**
- **FUNCTIONS OF HUMAN RESOURCE MANAGEMENT**
- **DATA BASE MANAGEMENT SYSTEM**
- **MARKET STRUCTURES**

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COMPOUND INTEREST

When money us borrowed on simple interest then the interest is calculated uniformly on the original principal throughout the loan period. Under this method, the borrower and the lender agree to fix up a certain unit of time say yearly or half-yearly or quarterly, to settle the previous account.

In such cases, the interest accrued during the first unit of time is added to the original principal and the amount so obtained is taken as the Principal for the second unit of time. The amount of this principal at the end of second unit of time becomes the principal for the third unit of time and so on. After a certain specified period, the difference between the amount and the money borrowed is called the compound interest (C.I.) for that period.

- **Useful formulae to remember**

1. If P is the original principal, R is the rate of interest per annum, T is the number of years, of which the money is lent and A is the final amount, then

$A = P\left(1+\frac{R}{100}\right)^{T}$ And C.I. = A – P

2. When interest is compounded half-yearly, then $A = P\left(1+\frac{(R/2)}{100}\right)^{2T}$

3. When interest is compound quarterly, then $A = P\left(1+\frac{(R/4)}{100}\right)^{4T}$

4. When time is a fraction of a year, say $4\frac{2}{3}$ years, then

$A = P\left(1+\frac{R}{100}\right)^{4} \times \left(1+\frac{2/3R}{100}\right)$

5. When rate are different for different year, say R_1%, R_2%, R_3% for 1st, 2nd and 3rd year respectively Then, $A = P\left(1+\frac{R_1}{100}\right)\times\left(1+\frac{R_2}{100}\right)\times\left(1+\frac{R_3}{100}\right)$

6. If a certain sum becomes m times in t years, then rate of compound interest R is equal to $100\,[(m)^{1/t}-1]$.

7. If the difference between simple interest and compound interest on a certain sum of money for 2 years at R% per annum is D. Then the sum (Principal) $P=\left(\frac{100}{R}\right)^2\times D.$

8. If a sum A becomes B in T_1 years at a compound rate of interest, then after T_2 years the sum becomes $\frac{B^{\frac{T_2}{T_1}}}{A^{\frac{T_2}{T_1}}}$ rupees.

9. The fixed unit of time is known as conversion period.

10. The compound interest is calculated annually in general unless some other period is clearly otherwise mentioned.

SOLVED EXAMPLES

Ex.1 What would be the compound interest obtained on an amount of Rs. 12000 at the rate of 9 percent per annum for Rs.3 years? (Round off two digits after decimal).

Sol.1 Compound interest $=P\left[\left(1+\frac{R}{100}\right)^T-1\right]=12000\left[\left(1+\frac{9}{100}\right)^3-1\right]$

$=12000\left[\left(\frac{109}{100}\right)^3-1\right]=12000\left[\frac{109\times109\times109-100\times100\times100}{100\times100\times100}\right]$

$=12000\times\frac{295029}{1000000}=12000\times0.295029=\text{Rs.}3540.35$

SEATING ARRANGEMENTS

In order to solve seating arrangement questions, first of all diagram should be made. By doing so questions are easily and quickly solved.

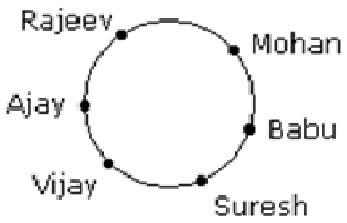
SOLVED EXAMPLES

Ex. 1:

1. 6 Boys are sitting in a circle and facing towards the centre of the circle.
2. Rajeev is sitting to the right of Mohan but he is not just at the left of Vijay.
3. Suresh is between Babu and Vijay.
4. Ajay is sitting to the left of Vijay.

   Who is sitting to the left of Mohan?

Sol.1:



Hence, Babu is sitting to the left of Mohan.

IDIOMS AND PHRASES

Phrase Definition:

A sequence of words intended to have meaning; a characteristic way of expression.

Synonyms: catchphrase, expression, idiom, diction, byword

Idiom Definition:

A speech form or an expression of a given language that is peculiar to itself grammatically or cannot be understood from the individual meanings of its elements, as in keep tabs on.

Synonyms: jargon, argot, phrase, colloquialism

Examples:

Back out — to withdraw from a promise, contract: I felt grieved when he backed out of his promise to help me.

Back up — to support; to sustain: He backed up his report with relevant statistics.

Bear upon — to be relevant to: This argument does not bear upon the subject under discussion.

Blow up — to explode: The mine blew up and all the labourers working inside were killed.

Call forth — to provoke: The minister's views on the disinvestment policy of the government called forth a good deal of bitter criticism.

Call out — to shout: I called out to him but he disappeared in the dark.

— To announce by calling or shouting: The Manager called out to the peon that he was being immediately fired.

FUNCTIONS OF HUMAN RESOURCE MANAGEMENT

An effective manager should be able to utilize human and non-human resources to bring about this alignment and eventually achieve these goals. A manager's handling of the human assets reflects his managerial capabilities. Managing people is one of the biggest challenges for any manager, for the following reasons:

- Individuals differ from each other in terms of their values, attitudes, beliefs and culture. This leads to a very complex situation in an organizational context.
- The stimulating and motivational factors might not be the same for all the employees. It is important to understand the individual needs of these employees and cater to these needs.
- The expectations of employees of today are much greater when compared to the employees of yesteryears. They know they are valuable assets and demand to be treated as such.

HRM functions can be broadly classified into two categories:

1 Managerial functions; and 2 Operative functions

Managerial Functions

Managerial functions of the human resource department are planning, organizing, staffing, directing and controlling. All these functions have an impact on the operative functions, as shown in Figure.

Planning

Planning involves formulating the future course of action. to achieve organizational goals

It also includes identifying human resource requirements and forecasting personnel needs, foreseeing the changes in employee attitudes and evolving effective ways of handling these changes.

Organizing

Organizing involves establishing an intentional structure of roles for people in an organization Structural considerations such as the chain of command, division of labor, and assignment of responsibility are part of the organizing function.

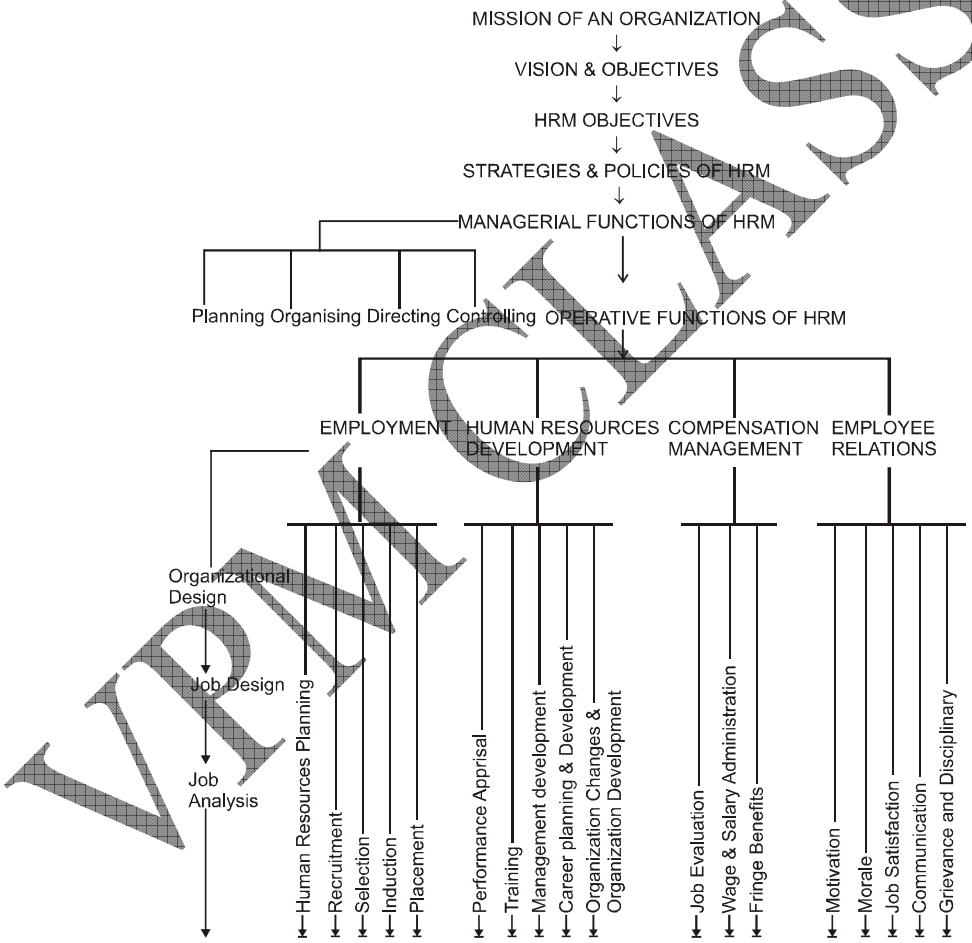


Fig : Functions of HRM

Staffing

This is the process of obtaining and maintaining capable and competent personnel in various positions at all levels. It broadly encompasses manpower planning, recruitment, selection, placement, induction and orientation, transfer, career progression and separation.

Directing

It is the process of directing all the available resources towards the common organizational goals. It also involves coordination between different departments to ensure maximum utilization of all resources including human resources.

Controlling

The measurement and rectification of activities to ensure that events conform to plans is known as controlling. This function measures performance against goals and plans, identifies deviations and by placing the process back on track, helps in the accomplishment of plants.

Auditing training programs, analyzing labor turnover records, directing morale surveys, and conducting exit interviews are different ways of controlling the HRM function.

Operative Functions

The operative functions of HRM are related to specific activities of HRM, viz., employment, development, compensation and employee relations.

The various operative functions of HRM are discussed below :

Employment

Employment is the first operative function of HRM. This involves procuring and employing individuals with suitable knowledge, skills, experience and aptitude necessary to perform various jobs. It includes functions such as job analysis, human resource planning, recruitment, selection, placement, and induction.

Job Analysis Job analysis is the process by which the tasks which comprise the job are determined and the skills and abilities required to perform it successfully are identified. It involves :

- Preparing job description, job specification, job requirements and employee specification so that the HR manager can determine the nature, levels and quantum of human resources required.
- Providing the guides, plans, and basis of job design and redesign. It also forms the basis for all operative functions of HRM.

Human Resource Planning – Human resource planning involves forecasting the human resource requirements of an organization and the future supply of human resources, and making suitable adjustments between these two in correlation with organizational plans. It also involves assessing the possibility of developing the human resources to match the requirements, by introducing appropriate changes in the functions of HRM.

Recruitment – To a large extent, the effectiveness of an organization depends on the effectiveness of its employees. Hence recruitment of human resources becomes a significant HR function. Recruitment is the process of seeking and attracting prospective candidates against a vacancy in an organization.

Selection – The process of identifying and establishing the credentials of a candidate for a job to ensure success is referred to as selection.

Placement - After a selected candidate conveys his acceptance of the offer of employment made by an organization, his placement has to be decided based on the needs of the organization.

Induction – Introducing a new employee to the organization, its business, the organization culture, its values and beliefs, and practices and procedures is termed as induction.

DATA BASE MANAGEMENT SYSTEM :

A database management system (DBMS) is defined as a collection of interrelated data and a set of programs to access the data. It contains information about a particular business enterprise. The examples of some of database applications are banking, universities, sales, human resources and manufacturing. The most typical DBMS is a relational database management system (RDBMS). ON PCs, Microsoft Access is a popular example of a single or small - group user DBMS.

The range of database applications can be divided into five categories: Personal databases, workgroup database, department databases, enterprise databases, and Internet, intranet and extranet databases. **Personal databases** are designed to support one user. They have long resided on personal computers including laptops. They are widely used because they can often improve personal productivity. **A workgroup** is a relatively small team of people who collaborate on the same project or application or on a group of similar projects or applications. A **department** is a functional unit within an organization and is generally larger than a workgroup and is responsible for a more diverse range of functions. An **Enterprise database** is the one whose scope is the entire organization or enterprise or many different department.

LEVELS OF ABSTRACTION

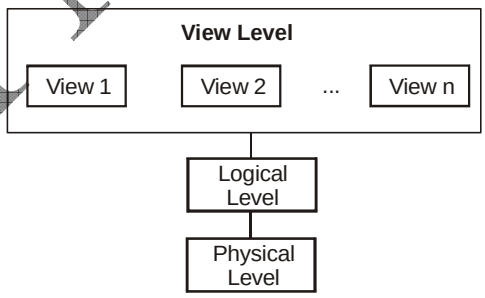
1. **Physical level** describes how a record (e.g., employee) is stored.
2. **Logical level** describes data stored in a database, and the relationships among the data.

   Type employee = record

   Empid : integer;
   Last name: string;
   First name : string;
   End ;
3. **View Level :** Application programs hide details of data types. Views can also hide information (e.g., salary) for security purposes.

VIEW OF DATA

Architecture for a database system.



Figure

ADVANTAGES OF DBMS

- Control of data redundancy.
- Data consistency.
- More information from the same amount of data.
- Enforcement of standards.
- Improved data accessibility and responsiveness.
- Improved maintenance through data independence.
- Improved backup and recovery services.
- Economy of scale.
- Sharing of data.
- Improved data integrity
- Balanced conflicting requirements.
- Increased productivity.
- Increased concurrency.

DISADVANTAGES OF DBMS

- Complexity.
- Additional hardware costs.
- Performance.
- Size.
- Cost of conversion.
- Higher impact of a failure.

MARKET STRUCTURES

(A) Perfect Competition (B) Monopoly
(C) Comparison Between Monopoly And Perfect Competition
(D) Monopolistic Competition (E) Oligopoly

The term market structure refers to the degree of competition prevailing in that particular market.

In the modern analysis, markets are classified on the basis of three criteria
(a) Substitutability of products. (b) Interdependence of firms, and
(c) The ease of entry.

The first two criteria use cross-elasticities of demand for the classification of the markets while the third criterion uses Bain's concept of the condition of entry for the classification of the markets.

Perfect Competition

Conditions of perfect competition have been assumed to prevail in all the markets. A perfectly competitive industry contains a large number of firms selling a homogeneous product.

Imperfect Competition

A market is imperfectly competitive if some individual sellers have some degree of control over price of the output. This broad definition of imperfect competition encompasses markets of many different types, which can be distinguished by further classification.

Monopoly. In monopoly there is only one seller producing and selling a product which has no close substitutes. The monopolist firm is the industry and the demand of the monopolist coincides with the industry demand. The monopolist can change both price and quantity. The price elasticity of demand faced by the monopolist is finite. Finally since there is only one firm, entry is totally blockaded.

Monopolistic Competition. It exists when many sellers compete to sell a differentiated product in a market into which the entry of new sellers is possible. In a monopolistically competitive market the product of each is a close substitute of the products of the others.

Oligopoly. In an oligopoly market there are few sellers so that there is interdependence among the sellers and the sellers are aware of it. Each firm takes into account the rivals' reaction. The products produced may be homogeneous or heterogeneous. If the product is homogeneous it is known as pure oligopoly. On the other hand, if the products can be differentiated it is known as differentiated oligopoly.

Bilateral Monopoly. It is a market form where one buyer faces one seller. When bilateral monopoly exists, the single buyer and the single seller individually possesses some power to fix the price at which the transaction takes place between them.

Monopsony. It is the complementary form of monopoly. In this market form there exists only one buyer and a large number of sellers, other conditions remaining the same as under monopoly.

Oligopsony. It is the complementary form of oligopoly. Here we have a few buyers and a large number of sellers, other conditions remaining the same as under oligopoly.

Duopoly. It is a special case of oligopoly where there are only two sellers, all other conditions remaining the same as under oligopoly.