



NEERAJ[®]

M.C.S.-52

PRINCIPLES OF MANAGEMENT AND INFORMATION SYSTEMS

By: Ashok Arora

B.Sc., PGDAC, A Level, B Level

*Question Bank cum Chapterwise Reference Book
Including Many Solved Question Papers*



**NEERAJ
PUBLICATIONS**

(Publishers of Educational Books)
(An ISO 9001 : 2008 Certified Company)

Sales Office:
1507, 1st Floor, Nai Sarak, Delhi - 6
Ph.: 011-23260329, 45704411,
23244362, 23285501
E-mail: info@neerajignoubooks.com
Website: www.neerajignoubooks.com

MRP ₹ 240/-

Published by:

NEERAJ PUBLICATIONS

Sales Office : 1507, 1st Floor, Nai Sarak, Delhi-110 006

E-mail: info@neerajignoubooks.com

Website: www.neerajignoubooks.com

Reprint Edition with Updation of Sample Question Paper Only

Typesetting by: Competent Computers

Printed at: Novelty Printer

Notes:

1. For the best & up-to-date study & results, please prefer the recommended textbooks/study material only.
2. This book is just a Guide Book/Reference Book published by NEERAJ PUBLICATIONS based on the suggested syllabus by a particular Board/University.
3. The information and data etc. given in this Book are from the best of the data arranged by the Author, but for the complete and up-to-date information and data etc. see the Govt. of India Publications/textbooks recommended by the Board/University.
4. Publisher is not responsible for any omission or error though every care has been taken while preparing, printing, composing and proof reading of the Book. As all the Composing, Printing, Publishing and Proof Reading, etc. are done by Human only and chances of Human Error could not be denied. If any reader is not satisfied, then he is requested not to buy this book.
5. In case of any dispute whatsoever the maximum anybody can claim against NEERAJ PUBLICATIONS is just for the price of the Book.
6. If anyone finds any mistake or error in this Book, he is requested to inform the Publisher, so that the same could be rectified and he would be provided the rectified Book free of cost.
7. The number of questions in NEERAJ study materials are indicative of general scope and design of the question paper.
8. Question Paper and their answers given in this Book provide you just the approximate pattern of the actual paper and is prepared based on the memory only. However, the actual Question Paper might somewhat vary in its contents, distribution of marks and their level of difficulty.
9. Any type of ONLINE Sale/Resale of "NEERAJ IGNOU BOOKS/NEERAJ BOOKS" published by "NEERAJ PUBLICATIONS" on Websites, Web Portals, Online Shopping Sites, like Amazon, Flipkart, Ebay, Snapdeal, etc. is strictly not permitted without prior written permission from NEERAJ PUBLICATIONS. Any such online sale activity by an Individual, Company, Dealer, Bookseller, Book Trader or Distributor will be termed as ILLEGAL SALE of NEERAJ IGNOU BOOKS/NEERAJ BOOKS and will invite legal action against the offenders.
10. Subject to Delhi Jurisdiction only.

© Reserved with the Publishers only.

Spl. Note: This book or part thereof cannot be translated or reproduced in any form (except for review or criticism) without the written permission of the publishers.

Get Books by Post (Pay Cash on Delivery)

If you want to Buy NEERAJ IGNOU BOOKS then please order your complete requirement at our Website www.neerajignoubooks.com . where you can select your Required NEERAJ IGNOU BOOKS after seeing the Details of the Course, Name of the Book, Printed Price & the Cover-pages (Title) of NEERAJ IGNOU BOOKS.

While placing your Order at our Website www.neerajignoubooks.com You may also avail the Various "Special Discount Schemes" being offered by our Company at our Official website www.neerajignoubooks.com.

We also have "Cash of Delivery" facility where there is No Need To Pay In Advance, the Books Shall be Sent to you Through "Cash on Delivery" service (All The Payment including the Price of the Book & the Postal Charges etc.) are to be Paid to the Delivery Person at the time when You take the Delivery of the Books & they shall Pass the Value of the Goods to us. We usually dispatch the books Nearly within 3-4 days after we receive your order and it takes Nearly 4-5 days in the postal service to reach your Destination (In total it take nearly 8-9 days).



NEERAJ PUBLICATIONS

(Publishers of Educational Books)

(An ISO 9001 : 2008 Certified Company)

1507, 1st Floor, NAI SARAK, DELHI - 110006

Ph. 011-23260329, 45704411, 23244362, 23285501

E-mail: info@neerajignoubooks.com Website: www.neerajignoubooks.com

CONTENTS

PRINCIPLES OF MANAGEMENT AND INFORMATION SYSTEMS

Question Bank – (Previous Year Solved Question Papers)

| | |
|---|------|
| <i>Question Paper—June, 2019 (Solved)</i> | 1-5 |
| <i>Question Paper—December, 2018 (Solved)</i> | 1-6 |
| <i>Question Paper—June, 2018 (Solved)</i> | 1-9 |
| <i>Question Paper—December, 2017 (Solved)</i> | 1-4 |
| <i>Question Paper—June, 2017 (Solved)</i> | 1-4 |
| <i>Question Paper—December, 2016 (Solved)</i> | 1-7 |
| <i>Question Paper—June, 2016 (Solved)</i> | 1-9 |
| <i>Question Paper—December, 2015 (Solved)</i> | 1-7 |
| <i>Question Paper—June, 2015 (Solved)</i> | 1-10 |
| <i>Question Paper—June, 2014 (Solved)</i> | 1-6 |
| <i>Question Paper—December, 2013 (Solved)</i> | 1-7 |
| <i>Question Paper—December, 2012 (Solved)</i> | 1-11 |
| <i>Question Paper—June, 2011 (Solved)</i> | 1-4 |
| <i>Question Paper—December, 2010 (Solved)</i> | 1-2 |

| <i>S.No.</i> | <i>Chapterwise Reference Book</i> | <i>Page</i> |
|--------------|-----------------------------------|-------------|
|--------------|-----------------------------------|-------------|

Management Systems

| | | |
|----|---|----|
| 1. | Organisational Overview | 1 |
| 2. | Management Functions and Business Processes | 8 |
| 3. | Management Systems | 28 |
| 4. | Business Values of Information System | 41 |

| <i>S.No.</i> | <i>Chapter</i> | <i>Page</i> |
|-------------------------------|--|-------------|
| Information Management | | |
| 5. | Portfolio Management and IT Applications | 57 |
| 6. | Enterprise Resource Planning System | 66 |
| 7. | Intelligence Information Systems | 85 |
| 8. | Social, Ethical and Legal Aspects | 108 |
| | | ■ ■ |

**Sample Preview
of the
Solved
Sample Question
Papers**

Published by:



**NEERAJ
PUBLICATIONS**

www.neerajbooks.com

QUESTION PAPER

(June – 2019)

(Solved)

PRINCIPLES OF MANAGEMENT AND INFORMATION SYSTEMS

Time: 2 Hours]

[Maximum Marks: 50

Note: Question no. 1 is compulsory. Answer any three questions from the rest.

Q. 1. (a) Differentiate between Vertical and Horizontal organizations. Give an example for each.

Ans. Ref.: See Chapter-1, Page No. 3, 'Vertical and Horizontal Organisations'.

(b) List and describe the tools used in requirement analysis of software design and its management.

Ans. Ref.: See Chapter-2, Page No. 19, Q. No.10.

(c) What are "Discounted Cash Flow" (DCF) and "Payback Period"? How are they important for finance department of any organization?

Ans. Ref.: See Chapter-4, Page No. 43 'Discount Cash Flow'.

Payback Period: The payback period is another method to evaluate an investment project. The payback method focuses on the payback period. The payback period is the length of time that it takes for a project to recoup its initial cost out of the cash receipts that it generates. This period is sometimes referred to as "The time that it takes for an investment to pay for itself." The basic premise of the payback method is that the more quickly the cost of an investment can be recovered, the more desirable is the investment. The payback period is expressed in years. When the net annual cash inflow is the same every year, the following formula can be used to calculate the payback period:

Formula/Equation: The formula or equation for the calculation of payback period is as follows:

Payback Period = Investment Required/Net Annual Cash Inflow

(d) "ERP" implementation can improve the performance and efficiency of an organization." Justify the statement with reasoning.

Ans. Ref.: See Chapter-6, Page No. 70, Q. No. 2.

Q. 2. (a) Write short notes on the following :

(i) SCM

Ans. Ref.: See Chapter-6, Page No. 70, 'Supply Chain Management'.

(ii) ERP

Ans. Ref.: See Chapter-6, Page No. 66, 'Introduction'.

(iii) CRM

Ans. Ref.: See Chapter-6, Page No. 69, 'Customer Relationship Management'.

(b) Explain the term TPS. Mention five of its functional categories.

Ans. Ref.: See Chapter-3, Page No. 29, 'Transaction Processing Systems (TPS)' and Page No. 31, Q. No. 4.

Q. 3. (a) Compare and contrast the following :

(i) Expert systems and Fuzzy expert systems

Ans. Ref.: See Chapter-7, Page No. 87 'Expert Systems' and Page No. 88, 'Fuzzy Expert'.

(ii) MOLAP and ROLAP

Ans. Ref.: See Chapter-7, Page No. 91 'MOLAP' and 'ROLAP'.

Also add: MOLAP: This is the more traditional way of OLAP analysis. In MOLAP, data is stored in a multi-dimensional cube. The storage is not in the relational database, but in proprietary formats.

Advantages

- **Excellent performance:** MOLAP cubes are built for fast data retrieval, and is optimal for slicing and dicing operations.
- **Can perform complex calculations:** All calculations have been pre-generated when the cube is created. Hence, complex calculations are not only doable, but they return quickly.

Disadvantages

- **Limited in the amount of data it can handle:** Because all calculations are performed when the cube is built, it is not possible to include a large amount of data in the cube itself. This is not to say that the data in the cube cannot be derived from a large amount of data. Indeed, this is possible. But in this case, only summary-level information will be included in the cube itself.
- **Requires additional investment:** Cube technology are often proprietary and do not already exist in the organization. Therefore, to adopt MOLAP technology, chances of additional investments in human and capital resources are needed.

ROLAP: This methodology relies on manipulating the data stored in the relational database to give the appearance of traditional OLAP's slicing and dicing functionality. In essence, each action of slicing and dicing is equivalent to adding a "Where" clause in the SQL statement.

Advantages

- **Can handle large amounts of data:** The data size limitation of ROLAP technology is the limitation on data size of the underlying relational database. In other words, ROLAP itself places no limitation on data amount.
- **Can leverage functionalities inherent in the relational database:** Often, relational database already comes with a host of functionalities. ROLAP technologies, since they sit on top of the relational database, can therefore leverage these functionalities.

Disadvantages

- **Performance can be slow:** Because each ROLAP report is essentially a SQL query (or multiple SQL queries) in the relational database, the query time can be long if the underlying data size is large.
- **Limited by SQL functionalities:** Because ROLAP technology mainly relies on generating SQL statements to query the relational database, and SQL statements do not fit all needs (for example, it is difficult to perform complex calculations using SQL), ROLAP technologies are therefore traditionally limited by what SQL can do. ROLAP vendors have mitigated this risk by

building into the tool out-of-the-box complex functions as well as the ability to allow users to define their own functions.

(b) What is meant by "Total Cost of Ownership (TCO)" of an information system? Describe its various components.

Ans. It is a financial estimate of all direct and indirect costs associated with a purchased or acquired asset over its entire lifetime, life expectancy or lifecycle. It is intended to aid consumers and business entity managers determine the total costs of owning a given product, system or other asset. As an accounting concept, it may also be a component of full cost accounting – a general term for collecting and compiling for presentation all economic, social and environmental information about a purchase or acquisition. In ecological economics, TCO also includes social costs.

Information Technology: This connotation refers to a financial estimate of all direct and indirect costs associated with a purchase, capital investment or acquisition of computer hardware and software. Indirect costs include initial installation, personnel training by in-house staff or outside consultants, maintenance, technical support, upgrades and downtime (estimate of business revenue loss). This term is also known as cost of ownership or ownership costs.

There are three key components to TCO calculations:

1. Acquisition/Physical Hardware Costs
2. Operating Costs
3. Personnel Costs

Acquisition Costs: Acquisition/Physical Hardware costs include the cost of equipment or property before taxes, but after commissions, discounts, purchasing incentives, and closing costs. Sometimes this will include one-time peripheral equipment or upgrades necessary to installation or utilization of the asset.

Operating Costs: Operating costs include subscriptions or services needed to put the item into business use. This includes utility costs, direct operator labor, and initial training costs.

Personnel Costs: Personnel overhead may include administrative staffing, support personnel to the equipment, facility housing the equipment and

Sample Preview of The Chapter

Published by:



**NEERAJ
PUBLICATIONS**

www.neerajbooks.com

PRINCIPLES OF MANAGEMENT AND INFORMATION SYSTEMS

MANAGEMENT SYSTEMS

Organisational Overview



INTRODUCTION

An organisation uses human, physical, financial and information resources at all levels of the system to produce output. The structure of an organisation defines the various organisational components, their relationships and hierarchy. There are different types of organisational structures. An organisational structure has three important components: Complexity, Formalisation and Centralisation.

In this chapter, we will discuss the characteristics, functions and structures of various organisations. We will also discuss the five most acceptable and distinct stages in the life cycle of an organisation. The important questions with answers are given at the end of the chapter.

CHAPTER AT A GLANCE

ORGANISATION AND ITS TYPES

An *organisation* is a stable, formal social structure. It uses human, physical, financial and information resources at all levels of the system to produce output. In technical terms, we can define organisation as a stable, formal social structure that takes resources from the environment and processes them to produce outputs. In behavioural terminology, an organisation can be defined as collection of rights, privileges, obligations, and

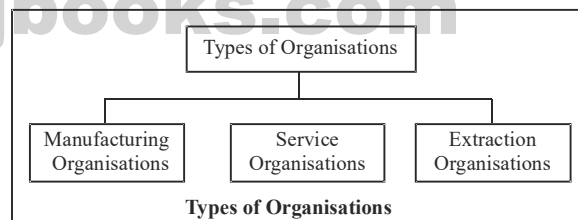
responsibilities that are delicately balanced over a period of time through conflict and conflict resolution.

Organisations are of three major types:

1. Manufacturing Organisations: They produce goods by conversion or by processing of raw materials into finished goods.

2. Service Organisations: They do not produce any tangible goods but provide services only.

3. Extraction Organisations: They produce goods by extracting them from the earth.



ORGANISATIONAL STRUCTURE

The structure of an organisation defines how job tasks are formally divided, grouped and coordinated. It defines the various organisational components, their relationships and hierarchy.

Types of Organisational Structures

According to Mintberg (1979), there are four types of organisational structures:

1. Bureaucracy: These are formal organisations with a clear-cut division of labour, abstract rules and

2 / NEERAJ : PRINCIPLES OF MANAGEMENT AND INFORMATION SYSTEMS

procedures, and impartial decision making. They use technical qualifications and professionalism as a basis for promoting employees.

2. Entrepreneurial Structure: Such organisations are young, small firms in a fast-changing environment. They are dominated by a single entrepreneur and managed by a single chief executive officer.

3. Machine Bureaucracy: Such organisations are large bureaucracies, which are organised into functional divisions that centralise decision products, and exist in a slow-changing environment.

4. Professional Bureaucracy: They are knowledge-based organisations, which are dominated by department heads with weak centralised authority and operate in a slowly changing environment.

Key Elements of Organisations

For designing an organisational structure, the following key elements are required:

1. Work Specialisation (Division of Labour): It describes the degree to which tasks in an organisation are subdivided into different jobs.

2. Departmentalisation: The basis by which jobs are grouped together is called departmentalisation.

3. Formalisation: It refers to the degree to which jobs within the organisation are standardised.

4. Span of Control: It refers to the number of employees that can be directed efficiently and effectively by a manager.

5. Chain of Command: It refers to a line of authority that extends from the top to the lowest level.

6. Centralisation: It refers to the degree to which decision-making is concentrated to a single point in the organisation.

7. Decentralisation: It refers to the degree to which decision-making is distributed to various positions in the organisation.

ORGANISATIONAL CHARACTERISTICS

The common characteristics of all organisations are:

1. Division of Labour: Organisations practice division of labour both vertically and horizontally. Vertical division includes three basic levels – top, middle, and bottom while horizontal division divides work by defining task groups, or departments, and assigning workers with applicable skills to those groups.

2. Decision-making Structures: These structures are used to organise authority in an organisation.

3. Rules, Policies, and Procedures: They serve as templates of managerial guidance in all sectors of organisational production and behaviour.

4. Degree of Formality: Organisations can be categorised as informal or formal, depending on the degree of formalisation of rules within their structures.

Organisations mainly differ in size, function, technology, environment and business processes. They reside in environment from which they draw resources. They also provide goods or services to the environment. There are two categories of environmental influences: *specific* or *general*. The specific environment includes the network of suppliers, distributors, government agencies, and competitors, while the general environment includes cultural value, economic condition, legal/political environment and quality of education.

ORGANISATIONAL FUNCTIONS

The various functions for different organisations are:

1. Bureaucracy: Bureaucracy refers to the way by which the administrative execution and enforcement of legal rules is socially organised. Examples: govt. organisations, hospitals, etc.

2. Business: Business organisations work on certain rules, which govern their formation and operation. They include the sole proprietorship firms, partnership firms, limited companies, etc.

3. Charity: Charity is the main function of the charitable organisations such as dispensaries, social groups, etc.

4. International Cooperation: Cooperation among different countries is the main function of specialized international organisations such as United Nations, Interpol, World Health Organisations, etc.

5. Mutual Cooperation: Cooperation among people for mutual benefits is the main function for the cooperative organisations or societies such as building societies, cooperative banks, etc.

6. Advocacy: Social, cultural, legal, and environmental advocacy is the function of Non-governmental organisations (NGOs), which are not part of a government.

LIFE CYCLE OF AN ORGANISATION

The five most acceptable and distinct stages in the life cycle of an organisation are (1) Start-up, (2) Growth, (3) Decline, (4) Renewal, and (5) Failure.

1. Start-up Phase (Birth): First of all, an organisation is created and its presence is established in the industry.

2. Growth Phase: It is further divided into four sub-phases of growth:

- (a) **Childhood:** In this sub-phase, the organisation begins to learn new skills and to build a strong infrastructure.
- (b) **Adolescence:** In the next sub-phase, the organisation expands the scope of its actions and learning.
- (c) **Adulthood:** In this sub-phase, the organisation achieves a greater level of responsibility.
- (d) **Maturity:** Finally, the organisation uses its legacy to strengthen it further.

3. Decline Phase: The organisation may go into the decline phase due to many reasons such as inefficient management decisions, poor teamwork, insufficient resources, etc.

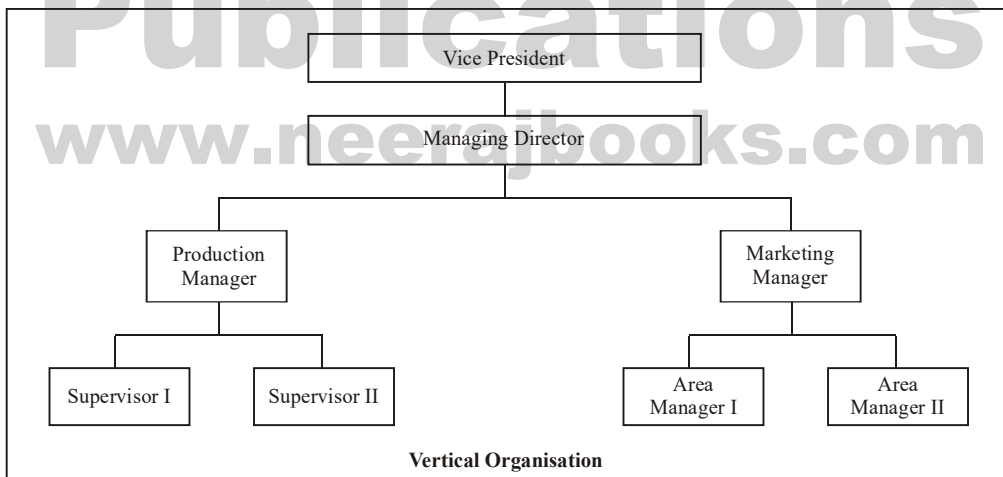
4. Renewal Phase: In this phase, the organisation resists the urge to stay comfortable by developing new strategic policies and operating skills.

5. Failure Phase: The organisation may be closed or being acquired and merged into another organisation.

VERTICAL AND HORIZONTAL ORGANISATION

An organizational structure has three important components: Complexity, Formalisation and Centralisation.

1. Complexity: It refers to the degree to which activities within the organisation are differentiated. It is of three types: Horizontal, Vertical and Spatial. Horizontal differentiation refers to the degree of differentiation between departments based on their processes such as product development process, customer support process, etc. Vertical differentiation is characterised by the number of hierarchical levels in the organisation such as Finance Manager, Sales Manager, HR Manager, etc. Spatial differentiation refers to the degree to which the location of the organisations offices and facilities are geographically distributed such as North Region, South Region, etc.



2. Formalisation: It refers to the extent to which jobs within the organisation are specialised.

3. Centralisation: It refers to the degree to which decision-making is concentrated to one point within the organisation.

CHECK YOUR PROGRESS

Q. 1. What are the types of organisations at macro level? What is the distinctive features for each of these types?

4 / NEERAJ : PRINCIPLES OF MANAGEMENT AND INFORMATION SYSTEMS

Ans. At macro level, organisations are of three major types:

1. Manufacturing Organisations,
2. Service Organisations,
3. Extraction Organisations.

Features of various types of Organisations:

1. Manufacturing Organisations: They produce goods by conversion or by processing of raw materials into finished goods. Examples: Drug manufacturing, Electronic Goods companies, Furniture manufacturers, etc.

2. Service Organisations: They do not produce any tangible goods, but provide services only. Examples: Banking, Insurance, Transportation, etc.

3. Extraction Organisations: They produce goods by extracting them from the earth. Examples: Agriculture, Oil Extraction, etc.

Q. 2. What are the six key elements required for designing an organisational structure?

Ans. For designing an organisational structure, the following key elements are required:

(i) Work Specialisation (Division of Labour):

Work specialisation or division of labour describes the

degree to which tasks in an organisation are subdivided into various jobs.

(ii) Departmentalisation: Departmentalisation is the basis by which jobs are grouped together.

(iii) Formalisation: Formalisation refers to the degree to which jobs within the organisation are standardised.

(iv) Span of Control: Span of control refers to the number of employees that be directed efficiently and effectively by a manager in an organisation.

(v) Chain of Command: Chain of command refers to a unbroken line of authority that extends from the top to lowest level and clarifies who reports to whom.

(vi) Centralisation and Decentralisation: Centralisation refers to the degree to which decision-making is concentrated to a single point in the organisation, while decentralisation refers to the degree to which decision-making is distributed to various positions in the organisation.

Q. 3. How ‘Centralised Organisations’ are different from ‘Decentralised Organisations’? Give examples of each.

Ans. The differences between Centralised and Decentralised Organisations are described in the following table:

| <i>Centralised Organisation</i> | <i>Decentralised Organisation</i> |
|--|---|
| 1. Centralisation refers to the degree to which decision-making is concentrated to a single point in the organisation. | 1. Decentralisation refers to the degree to which decision-making is distributed to various positions in the organisation. |
| 2. Top management retains absolute authority for making almost all decisions. | 2. Top management retains authority for making major decisions (strategic). |
| 3. Middle level management is not entrusted with operational authority for taking decisions. | 3. Middle level management is entrusted with operational authority for taking decisions. |
| 4. It does not provide greater flexibility to tackle problems. | 4. It provides greater flexibility to tackle problems. |
| 5. Examples: <ul style="list-style-type: none"> ● Decision of an organisation to allow credit to its customers is made by the Director. ● The Director makes appointment of the employees. | 5. Examples: <ul style="list-style-type: none"> ● Decision of an organisation to allow credit to its customers is made by the Sales Manager. ● The HR Manager makes appointment of the employees. |

Q. 4. Indicate four common and five unique characteristics of organisation.

Ans. 1. Division of Labour: Vertically and horizontally.

2. Decision-making structures: These structures are used to organise authority in an organisation.