CHAPTER 2

Organization of Library Resources: Advanced

Location	Learning Outcome	Knowledge Evaluation	Performance Evaluation	Teaching and Training Method
Unit-1: Library Classification (Theory)				
Classroom or Library	Understanding Library Classification: • PMEST • DDC • Steps of Classifying a Document • Call Number	• Concepts of PMEST • Concepts of DDC • Steps for Classifying a Document • Elements of Call Number	• Identification of PMEST • Classification Practices • Formation of Call Number	**Interactive Lecture and Practice:** Construct class numbers for documents with simple, compound, and complex subjects • **Discuss the characteristics, merits, and demerits of different species of library classification schemes** **Activity:** Classification Practice and Formation of Call Number

Unit-2: Library Cataloguing (Theory)				
Location	**Learning Outcome**	**Knowledge Evaluation**	**Performance Evaluation**	**Teaching and Training Method**
Classroom, Library / Computer Laboratory	Understanding Library Cataloguing • Understanding Types of Authors • Understanding List of Subject Heading and its Utility • MARC 21	• Different Types of Authors • List of Subject Heading: Sears List of Subject Heading • Assigning Subject Headings • MARC 21	• Identifying Different types of Authors • Assigning Subject Headings using Sears List of Subject Headings • Understanding MARC Structure	**Interactive Lectures and Practices:** Understanding different types of Authors, Structure of List of Subject Heading, Assigning Subject Heading using Sears List of Subject Heading and Structure of MARC 21. **Activity:** Identifying different types of Authors, Assigning Subject Heading using Sears List of Subject Heading and Creating Catalogue either in KOHA or e-Granthalaya using MARC 21

UNIT-1

Library Classification (Theory)

2.1.0 Introduction

Classification is a process of grouping. It involves putting together like entities and separating unlike entities. Library Classification is a technique, which helps in the organization of documents and information so that the user can use sources of information effectively. The classes which appear as the major divisions of the universe of knowledge are the main classes in that scheme. This also means that main class is not a very precise term. Once the knowledge is organized into a number of main classes, the next step is to mark out for each main class the facets which are likely to be presented by subject falling within it. Main class (or a subject) is divided into Five Fundamental Categories

2.1.1 Concept of PMEST (Fundamental Category)

The Colon Classification scheme contains both, the basic subjects and their facets (which contain isolates). A basic subject can stand alone but in contrast an isolate is a term that mediates a basic subject. To create a class number, the basic subject is named first. The isolates follow, entered according to a facet formula. This formula states that every isolate in every facet is a manifestation of one of the five fundamental categories --personality, matter, energy, space, and time. Personality is the distinguishing characteristic of a subject. Matter is the physical material of which a subject may be composed. Energy is any action that occurs with respect to the subject. Space is the geographic component of the location of a subject. And time is the period associated with a subject.

As mentioned above, there are five fundamental categories into which a subject or main class is divided. These are the five aspects of a subject. Dr. Ranganathan named the five fundamental categories as PMEST, which is Personality, Matter, Energy, Space and Time. A subject may have a Personality aspect, a Matter aspect, an Energy aspect, a Space aspect, and a Time aspect.

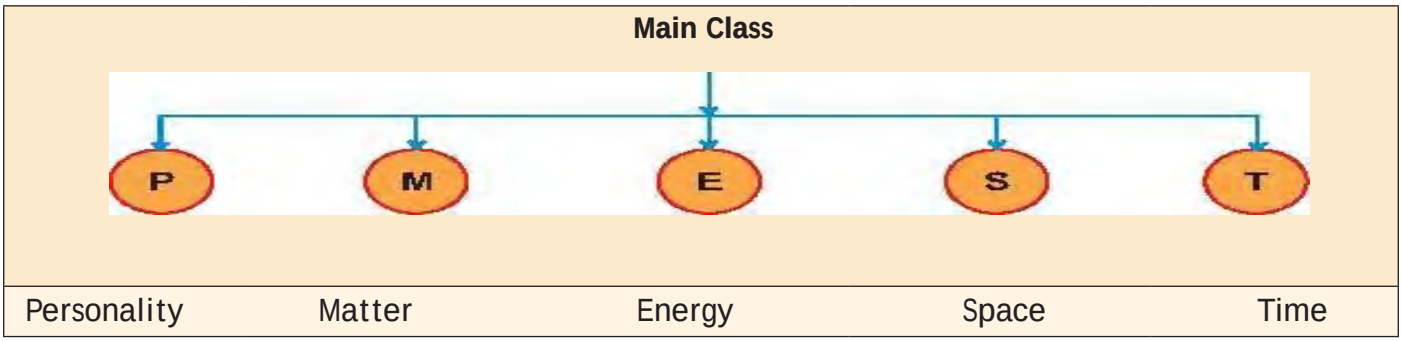

Figure 2.1.1: The five aspects of a subject

2.1.1.1 Time

According to Mills, the fundamental category, Time "is usually embodied in periods". According to Dr. Ranganathan, "The fundamental category time occurs in every subject forming a local description of local history of any subject". Time indicates that the entities under different subjects must change in its structure, meaning, history development, with the progress of times.

Example: History of the 18th century is different from that of the 15th century.

2.1.1.2 Space

According to Dr. Ranganathan, "the surface of the earth is a manifestation of the category 'Space'. It occurs in every subject forming a local description or local history of any subject." Most of the subjects, if not all, get manifested in relation with continents, countries and their subdivisions.

In CC (Colon Classification), there is a schedule of Geographical Divisions which can be attached to a subject. In DDC (Dewey decimal classification), there is a space facet applicable under the class History, and throughout the scheme the facet is available under the direction divide, like 940-999.

Example: In the following examples, the term denoting space is given in brackets

(i) Agriculture in (India) brought up to 1990.

(ii) History of education in (India)

2.1.1.3 Energy

According to Mills, the fundamental category, Energy is, "a category of facets which characterize the exercise of energy, i.e., activities, operations, processes, problems, etc." Palmer and Wells feel that Energy "usually presents itself as a problem to be solved, or a mode of work or approach." Dr. Ranganathan, in his Colon Classification, calls the facet based on the characteristic Energy, the problem facet. Thus, the fundamental Energy covers the problems, action including methods, functioning, etc. aspects of a main class. Many main classes will have certain units which deal

with the problems in the subject. These problems are generally applicable to all the organs of the class.

In the class Agriculture, certain processes and actions like sowing and harvesting also come under Botany; units like physiology, and pathology are noticed in Zoology and Medicine, which deal with functioning. Isolates, which make the category Energy, are generally important actions in the subject and commend a greater influence on the subject from two directions. One is when they are in general reference to the class and the second when they refer to the organs of the subject individually.

Dr. Ranganathan postulates that the energy aspect in a main class may manifest itself in different rounds of energy, that is, 2E= second round of energy after 1E; 3E= third round of energy after 2E and so on. In Agriculture, the energy focus 'manuring' needs to be followed by another energy facet consisting of foci (facet) such as collection, grading and application. Another example is from Medicine. Pathology or disease is a problem and therefore it is [1E] of the subject treatment and surgery, etc. are for actions on diseases themselves, and therefore, they are the [2E] of the subject.

2.1.1.4 Matter

Dr. Ranganathan postulates matter as a fundamental category capable of manifesting itself as the 'constituent of a whole'. However, Mills argues, "Matter is the category of facets which reflect substances, materials, etc. It is manifested clearly in most technologies and in many of the natural sciences; and it is generally absent from theoretical disciplines like Law, Economics, Literature, etc." Vikery feels that "Matter comprises constituent materials of all kinds."

The Matter facet is inherent in many subjects falling within a main subject. The ones the numerated in CC are: Library Science, Engineering, Sculpture, Painting and Music. The 7 edition of the Colon Classification has given large scope to the Matter facet. There are three groups of "Matter" viz. Matter Material, Matter Property and Matter Method.

For Example: In the Main class of Library Science, Matter figures as the reading material. In the class Painting, Matter figures as the materials used for painting. In the class Music, Matter figures as the musical instruments, and so on.

Dr. Ranganathan was convinced that the facet "Matter" should be expended into three groups and many isolates from the facet "Energy" be shunted to "Matter Property". The three groups of Matter are:

1. Matter Property [MP]

   Ex. Main Subject MP

	Biology	Morphology
		Physiology
	Education	Thinking
		Reasoning

2. Matter Method [MM]

Ex. Main Subject	MP
Chemistry	Physical Method
	Fluid Method

3. Matter Material [MM]

Ex. Main Subject	MP
Technology	Product
Biology	Substance

2.1.1.5 Personality

The fundamental category 'Personality' is most concrete, and the category 'Time' is the most abstract or the least concrete sector. The Personality facet indicates the core point of the subject at hand. According to Palmer and Wells, 'the term personality is used for the wholeness of any subject. Personality inheres in the subject itself and gives colour to the other fundamental concepts transforming them into concrete things.

The Personality facet is of prime importance in many subjects, belonging to different classes, and it is the most recognizable facet for the specialists of a class. Personality is the first facet in many subjects, and it is often experienced that the other facets work as attributes of personality for its further subdivision. Matter, Energy, Space, and Time are often required in relation with the personality facet. The other facets are required in lesser degree in relation to the main class. Without Personality there can be no organ, constituent, attribute, action, etc.

According to Dr. Ranganathan, if a concept cannot easily fit into the other four categories then it is probably a Personality facet. He further adds that Personality is only recognizable by elimination. After separating out the manifestation of Time, Space, Energy and Matter in the subject, the residue often turns out to be a personality facet. This may be called the Principle of Residue.

Within the Personality facet, we find a number of levels into which the whole personality is spread. These are known as levels of personality facet, P1, P2, P3, P4 and so on. The different levels are arranged with the help of the principles of helpful sequence.

Example, Personality facet

Main class	P1	P2	P3	P4
	Literature	Language	Form	Author work

The following example enumerates how the fundamental category, personality, is used in DDC and CC respectively:

Main class	Personality facet	DDC	CC
Psychology	Abnormal psychology	137	S6
Zoology	Vertebrate	596	K9

The fundamental category and the connecting symbols used to distinguish them in a class number are as indicated below

Personality : The connecting symbol is Comma (,)

Matter : The connecting symbol is semi-colon (;)

Energy : The connecting symbol is colon (:)

Space : The connecting symbol is Dot (.)

Time : The connecting symbol is inverted comma (')

2.1.2 Steps for Library Classification by Decimal Classification (DDC) and Colon Classification

Dr. Ranganathan has prescribed a procedure involving nine successive steps for translating the title of the document: for analysing the title of a specific subject into facets, and for giving it an appropriate class number. The steps are as given below.

Step 0: Write down the Raw Title (= Title as found in the document).

Step 1: Full title (= Title expressing each of the relevant basic and isolate ideas in the subject of the document, arrived at by filling up all the ellipses in the Raw title). Deriving the Expressive Title from the Raw Title by filling up ellipsis such as basic class or any other facet implied in the Raw Title. This is done by breaking down composite terms into their fundamental constituent terms, according to a principle which sets a limit to the semantic depth of the fundamental terms.

Step 2: Kernel Title (= Full title except the auxiliary or apparatus words and each composite term denotes a composite idea replaced by the fundamental constituent terms, which denote its fundamental constituent ideas).

Step 3: Analysed title (= Kernel Title with each kernel term marked by a symbol, which denotes the fundamental category of which the ideas denoted by the term is a manifestation and also the round and the level to which it is assigned in conformity to the postulates of classification). This is done essentially with the help of wall picture-principle, taking two kernel terms at a time.

Step 4: Transformed Title (=Analytical title with the kernel terms rearranged according to the symbols of analysis attached to them).

Step 5: Title in standard terms (=Transformed title with the Kernal terms replaced, wherever necessary by their respective equivalents as given in the appropriate schedules).

Step 6: Title in Facet Numbers (= Title in standard terms with the kernel terms replaced by their equivalent numbers). Deriving the title in Facet Number from the title in standard terms by translating the Basic Class Facet and every other facet into its Basic Class Number or the Isolate Number, as the case may be. This is done with the aid of the classification schedules. When any isolate is new, that is, not available in the schedule, its isolate number is constructed with the aid of the principles.

Step 7: Class number (got by removing the symbols of analysis and inserting the appropriate connecting symbols between the facet numbers in accordance with the Rules).

Step 8: Translate the synthesized class number into natural language by way of verification. In this step, carry out facet analysis of the Class Number, giving a digit-by-digit interpretation and verifying the correctness of the number.

Steps 0 to 4 deal with the work in the idea plane. Step 5 deals with the work in the verbal plane. Step 6 and 7 are concerned with the notational plane. Step 8 involves the examination of work in all the planes. Step 0 shows the title as it appears on the document. Under Step 1, adding the name of the main subject, if it is not included in the title and break the compound terms into their constituent terms. Under Step 2, it shows only those terms which denote kernel idea by removing other meaningless words like the auxiliary words -of, in, for, etc. The words that are used in a natural language do not require translation in the artificial language and are omitted. In Step 3, the Kernel ideas represented by their respective terms are analysed into categories (finding out who is what). They are branded according to the postulates. Under Step 4, these terms are arranged in a sequence of concrete to abstract, about which the postulate exists. Under Step 5, the non-standard terms are replaced by the terms adopted in the scheme of classification. Under Step 6, each term is translated into numbers. In Step 7, the various isolate numbers are connected with each other by the symbols prescribed by the postulates. Lastly, Step 8 examines the entire process in the light of the postulates.

Example: Feeding of Cattle in India

Step 0:Raw Title

Feeding of Cattle in India

Step 1: Full title

Feeding of Cattle in India in Animal Husbandry

As the name of the main class was missing in the raw title, it has been added under this step.

Step 2: Kernel Title

Feeding Cattle India Animal Husbandry

The words 'of' and 'in' are auxiliary words. They are not necessary for depicting the specific subject of the document. Hence, they are omitted

Step 3: Analyzed title

Feeding [E] cattle [P] India [S] Animal Husbandry (BC)

Feeding is an activity, hence the manifestation of Energy; Cattle is a group of animals, hence the manifestation of Personality, India is a geographical unit, hence the manifestation of Space; Animal Husbandry is a recognized basic class.

Step 4: Transformed Title

Animal Husbandry (BC) Cattle [P] Feeding [E] India [S]

The postulates prescribe that the BC will come first of all and the sequence of facets will be PMEST. As [M] and [T] are absent the sequence maintained is [P] [E] [S].

Step 5: Title in standard form

Animal Husbandry (BC) Cattle (P) Feeding (E) India (S)

All the terms used are standard terms. Therefore, there is no need for replacing them.

Step 6: Title in Numbers

From CC (6th ed.)	KX (BC) 2 [P] 1[E] 44 [S]
From DDC	636(BC) 2(P) 084 (E) 0954 (S)

Step 7: Synthesised Number

CC (6 ed.)	KX 2: 1.44
DDC	636.208 409 54

In CC, colon (:) was used to connect 1 of [E] and Dot (.) was used to connect 44 of [S]. In DDC, dot (.) is used to connect 2 (P) and 0 (zero) is used to connect 954 of (S). In 7 edition of CC semi colon (;) has been used to connect [MP] and Dot (.) is used to connect [S].

Step 8: Verification by reverse translation CC (6 ed.)

KX	is	Basic Class
2	is	Personality facet
1	is	Energy facet
44	is	Space facet

Meaning thereby 'Feeding of cattle in India'.

DDC

636	is	Basic class
2	is	Personality facet for cattle
084	is	Problem facet for feeding
0954	is	Space facet

Meaning thereby 'Feeding of cattle in India'.

2.1.3 Call Number

Besides the notation in a classification scheme, library material should also include an author indicator, i.e. the first three alphabets of an author's surname. Some libraries may also add a title indicator, date of publication, and/or a copy number. All these elements together, form a Call Number.

The purpose of the call number is to provide the address for an item acquired by the library.

This address is where the staff will shelve the item, and where the user can look for the item. The call number also allows a user to browse the collection, to find the available items on any given topic. The idea of creating the call number for each item in the library is that each item can have a unique address. It is the cataloguer's job to determine the specific focus of the item being catalogued, and group the various material dealing with the same topic together. It, thus, creates an organized and accessible collection.

The call number of a document consists of three parts

(i) Classification Number/Class Number

(ii) Book Number

(iii) Collection Number

Therefore, we can say

Call Number = Class Number + Book Number + Collection Number

2.1.3.1 Class Number

The class number of a document is an ordinal number representing the position of a class in a scheme of classification used in a library and also represents the subject matter of the document. The purpose of classification is to bring related items together in a helpful sequence from the general to the specific. There are several schemes of library classification available. The one used most widely in the libraries is the Dewey Decimal Classification (DDC). A classification scheme of Indian origin is the Colon Classification.

2.1.3.2 Book Number

A book number is the ordinal number which fixes the position of a document in a library, relative to the other documents belonging to the same class. The book number adds a further detail to the book. It is usually constituted from the author's name.

2.1.3.3 Collection Number

The collection number is a symbol denoting any special characteristics (size, physical form, or class of users, and so on.) of a group of books, with which the books may be separately located. In other words, the mark added to the class number and book number of a book to indicate a collection, is called the collection number. The following is a sample schedule for Collection Number:

Nature of Collection	Collection Number
Under-size	Underline book number
Oversize	Over line book number
Rare Book	RB
Text Book	TC
Film Strip	FS

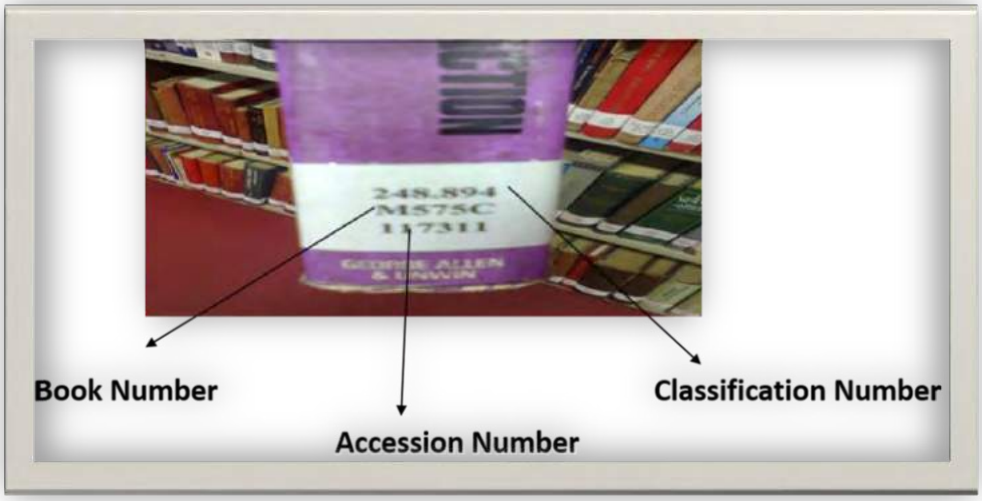

Figure 2.1.2 Call Number

Source: NITI Aayog Library

2.1.4 Summary

Any class enumerated in the first order array of a scheme of classification of the universe of knowledge is categorised as main class. To create a class number, the basic subject is named first. The isolates follow, entered according to a facet formula. This formula states that every isolate in every facet is a manifestation of one of the five fundamental categories -- personality, matter, energy, space, and time. It is easy to recognise Time, Space, Energy and matter. Classification of a document is the translation of the subject of document into notation. Dr. S. R. Ranganathan had prescribed nine successive steps for giving the Class number of a document. The call number is the address for an item acquired by the Library. Therefore, it is also called location tool.

2.1.5 Exercise

(i) Name the five fundamental categories?

(ii) Explain the process of recognizing the fundamental categories by giving an example?

(iii) Explain the steps in Library Classification with the help of an example?

(iv) Name the different parts of Call Number?

UNIT-2

Library Cataloguing (Theory)

2.2.0 Introduction

Cataloguing is the process by which, we create and maintain the database of books, Journals, audio-visual materials, etc. that are owned by a Library. The catalogue of a Library enables a person to find a book, of which the author is known. Therefore, author is an access point for the user. Library has to prepare author catalogue. According to Marriam Webster Dictionary, an author is the writer of a literary work. Encyclopaedia Britannica defines Author as one who is the source of some form of intellectual or creative work; especially, one who composes a book, article, poem, play, or other literary work intended for publication.

2.2.1 Types of Authors

There are following two kinds of authorship:

1. Personal Authorship
2. Corporate Body as a Corporate author

2.2.1.1 Personal Author:

Definition: A personal author is the person chiefly responsible for the creation of the intellectual or artistic content of a work. For example, writers of books and composers of music are the authors of the work they create; compilers of bibliographies are the authors of those bibliographies; cartographers are the authors of their maps; and artists and photographers are the authors of the works they create. In addition, in certain cases performers are the authors of sound recordings, films and video recordings.

General rules: Enter a work by one or more persons under the heading for the personal author (see Rule 21.4A of AACR2), the principal personal author, or the probable personal author. In some cases of shared personal authorship (see Rule 21.6) and mixed personal authorship (see 21.8-21.27, enter under the heading for the person named first. Make added entries as instructed in 21.29-21.30

2.2.1.2 Corporate Author:

Definition: A corporate body is an organization or a group of persons that is identified by a particular name and that acts, or may act, as an entity. Consider a corporate body to have a name if the words referring to it are a specific appellation rather than a general description. If in a script and language using capital letters for consistently capitalized and /or if, in a language using articles. The words are always associated with a definite article, consider the body to have a name. typical examples of corporate bodies are associations, institutions, business firms, nonprofit enterprises, governments, government agencies, projects and programmes, religious bodies, local churches, and conferences.

General Rule: Rule 21.1B2 to 21.B4 of AACR2R describe the headings for Corporate body.

2.2.2 Subject Heading: Sears List of Subject Heading and Keywords

The important function of a library catalogue is to provide access to documents in a library through their subject contents. In other word, subject headings are created for use in cataloguing and it reflect the topics covered in a given collection. A classified catalogue facilitates subject approach to documents in a library and the dictionary catalogue provides an alphabetical subject index through verbal subject representation of the content of documents. Subject headings for the document are constructed following their own designed, developed standard of rules and procedures. The subject heading systems commonly used by most libraries and bibliographical publications are Library of Congress Subject Headings (LCSH) and Sears List of Subject Headings (SLSH). Subject headings authority lists is a lists of authorised controlled vocabularies or terms arranged in alphabetical order to provide access to the subject of documents. The subject terms are readymade and mainly pre-coordinated headings where these are selected as needed by the cataloguer and are attached to the catalogue record of each item.

Subject headings authority lists help to ensure that the same heading is assigned to all works on the same subject. When existing subject headings are revised or new headings are added, cross-references often serve as the source for verification and validation of subject headings to individual cataloguing records for uniformity, consistent and current terminology. Thus, cross-references guide users to related headings and retrieve useful records.

2.2.2.1 Sears List of Subject Headings (SLSH)

Sears List of Subject Headings (SLSH) is an abridged version of the Library of Congress Subject Headings. SLSH was named after Minnie Earl Sears who compiled a list of subject headings in response to demands more suitable to the needs of the small library. List of Subject Headings for Small Libraries was first published in 1923. H.W. Wilson Company published the SLSH which

incorporate the new headings or changes in old headings. SLSH is widely used in the world by general libraries.

Formation of Subject Headings

SLSH like Library of Congress Subject Headings (LCSH) is an enumerated list of subject headings. In order to provide subject headings, the cataloguer has to only navigate through the standard list of subject headings like SLSH and select the most appropriate heading which matches the contents of the documents being indexed.

The headings, terminology and subdivisions used in SLSH, is like the pattern and practice of LCSH, with some modifications to serve the needs and requirements of small and medium libraries. The principles that guide the indexers in the choice and rendering of subject headings in SLSH are 'Specific Entry', 'Common Usage' and 'Uniformity'.

a) **Specific Entry:** A work should be entered under the most specific subject heading which accurately and precisely represents the content of the book. If a reader wants a book about bridges, the direct approach is to consult the catalogue under the heading Bridges, not under the large topic Engineering, or even the more restricted field, Civil engineering.

b) **Common Usage:** The subject heading chosen to express the contents of the document should be popular or common usage as preferred over scientific or technical names. A reader in a small public library will look under Birds, not Ornithology.

c) **Uniformity:** One uniform heading must be selected from several synonyms, and this heading must be applied consistently for the same topic. China, Chinaware, and Porcelain are all entered under Porcelain.

(i) Single Word Heading (Single Noun)

The simplest form of subject heading consists of a single noun. Examples: Art, Birds, Flowers, Tools, etc.

Homonyms Headings

These headings are differentiated by providing a contextual meaning of the word.

Seals (Animals)

Seals (Law)

Singular and Plural Headings

Choice must be made for used of singular (abstract ideas) and plural (objects and things) forms of single words as headings, as they carry different meanings.

Painting refers the art.

Paintings refers to the object.

(ii) Phrase Headings

Sometime the subject content of the document can be expressed only by more or less complex phrases. The different types of phrase headings recognised in SLSH are as follows:

Adjectival Phrase Headings

A noun is qualified by an adjective to get the specific concept of the subject.

American literature

Electric engineering

Prepositional Phrase Headings

Some concepts can be expressed only by more or less noun phrases connected by prepositions.

Freedom of information

Information storage and retrieval systems

Medicine as a profession

Women as physicians

(iii) Compound Headings

The compound headings used two nouns joined by 'and' to connect or express a relationship between two subjects which cannot be separated easily in concept and which are usually treated together in books.

Boats and boating

Religion and science

Good and evil

Joy and sorrow

(iv) Subdivisions

Examples of Form subdivisions:

Geology-Maps

Chemists-Directories

Bible-Pictorial works

Cross-References

Examples of subdivisions subject headings from a particular point of view:

Education-History

Religion-Philosophy

Radio-Laws and regulations

Examples of Chronological subdivisions:

United States-History-1945-1953

Examples of Geographic name subdivisions – Subject divided by place:

Agriculture-India

Music, Spanish

Examples of Geographic name subdivisions – Names of Places subdivided by subject:

India-Census

Italy-History

China- Climate

(v) Cross-References

With the SLSH 15th edition, 1994, 'x' (See ref.) and 'xx' (See also ref.) was replaced by thesaurus symbols such as UF (Used For)/USE, SA (See Also), BT (Broader Terms), NT (Narrower Terms) and RT (Related Terms). Below is a sample heading from the SLSH.

Card games

UF	Cards, Playing
	Playing cards
SA	Names of card games, to be added as needed
BT	**Games**
NT	**Bridge (Game)**
	Canasta (Game)

Card tricks

Solitaire (Game)

Tarot

RT **Gambling**

The three types of cross-references used in SLSH are discussed below:

A. Specific "See" References

The UF label stands for "Used for" and it designates those un preferred terms or phrases for which the subject heading is used instead. Such words and phrases might include the following:

(a) Synonyms or terms so nearly synonymous; e.g Cards, Play see **Cards games**

(b) Compound heading; e.g Evil and good see **Good and evil**

(c) Inverted form of a heading, when the noun is preceded by an adjective; e.g Education, Adult see **Adult Education**

(d) Variant spellings: Colour see **Color**

(e) Opposite of a term, Intemperance see **Temperance**

(a) Singular of a plural term; Mouse see **Mice**

B. Specific "See Also" References

As a rule, a term has only one broader term, unless the term is an example or aspect of two or more things. Following the BT label is a term 'Games' that a broader in application than the main heading term 'Card games.' The reference entry in the catalogue will be Games See Also **Card games.**

Following the NT label are terms that are narrower than the main heading. The reference entries in the catalogue will be

Card games

See also

Bridge (Game)

Canasta (Game)

Card tricks

Solitaire (Game)

Tarot

Following the RT label are terms related to the main term, on similar or associated subjects. Related terms are of more or less equal specificity, neither broader nor narrower. The term **Card games** is related to **Gambling** because not all card games involve gambling and not all gambling involves card games. Reference entry will be **Card Games** *See Also* **Gambling.**

C. General References

The SA stands for "See also" and introduces a "General Reference", not to a specific heading but to a general group or category of things. In the example of **Card games** given above, the "SA" label introduces the general reference to "names of card games, to be added as needed". This instruction provides reminder to the cataloguer not to be limited to the examples of card games given in the SLSH. In above example, there happen to be three card games appearing in the NT field under Card games, but if the library acquires a work devoted to the card game Rummy (Game), then the reference entry will be **Card Games** *See Also* **Rummy (Game).**

Entry Format and Filing Order

The SLSH remains an alphabetical subject heading list and has adopted thesaurus format to help cataloguer to distinguish relationships among terms and to establish appropriate references in the public catalogue based upon these relationships.

Like LCSH, the subject entries in SLSH are printed in boldface and the cross-references terms appear in light faces. SLSH follows the ALA Rules for Filing where all punctuations marks are ignored.

Sears List of Subject Headings is much simpler to use than the Library of Congress Subject Headings. As the rules and principles used in SLSH follow the same pattern as LCSH, it becomes easy for a library to change over to Library of Congress list when the library collection becomes large enough. As SLSH does not backed any library collections, so updating and revision of subject headings cannot keep pace with changing current terminology and growth of new subjects.

2.2.3 Machine Readable Catalogue: MARC21-(Latest Edition)

MARC (Machine-Readable Cataloging) **standards** are a set of digital formats for the description of items catalogued by libraries (such as books). It was developed by the US Library of Congress during the 1960s to create records that could be used by computers, and to share those records among libraries. By 1971, MARC formats had become the national standard for dissemination of

bibliographic data in the United States, and the international standard by 1973. There are several versions of MARC in use around the world, the most predominant being MARC 21, created in 1999 as a result of the harmonization of U.S. and Canadian MARC formats, and UNIMARC, widely used in Europe. The MARC 21 family of standards now includes formats for authority records, holdings records, classification schedules, and community information, in addition to the format for bibliographic records.

MARC 21 Format for Bibliographic Data is designed to be a carrier for bibliographic information about printed and manuscript textual materials, computer files, maps, music, continuing resources, visual materials, and mixed materials. Bibliographic data commonly includes titles, names, subjects, notes, publication data, and information about the physical description of an item. As its name suggests the format aims to meet the challenge of the 21st century.

A MARC record involves three elements: the record structure, the content designation, and the data content of the record. These are described below:

Record Structure: The structure of MARC records is an implementation of national and international standards, e.g., Information interchange format (ANSI Z39.2) and format for information exchange (ISO 2709).

Content Designation: Content designation, the codes and conventions established to identify explicitly and characterize further the data elements within a record and to support the manipulation of those data, is defined in the MARC 21 formats.

Data Content: The content of most data elements is defined by standards outside the formats, e.g., Anglo-American Cataloguing Rules, Library of Congress Subject Heading, and National Library of Medicine Classification.

A MARC 21 format is a set of codes and content designators defined for encoding machine-readable records. Formats are defined for five types of data: bibliographic, holdings, authority, classification, and community information.

Bibliographic Data Format: It contains format for encoding data elements needed to describe, retrieve and control various forms of bibliographic material. It is defined for books, serials, computer files, maps, music, visual materials and mixed material.

Bibliographic format blocks

0xx=Control information, numbers, codes

1xx= Main entry

2xx= Title, edition, imprint

3xx= Physical description, etc.

4xx= Series statements

5xx= Notes

6xx= Subject access fields

7xx= Name, etc. added entries or series

8xx= Series added entries, holding and locations

9xx= Reserved for local implementation

Holding Data Format: It contains format specification for encoding data elements pertinent to holding and location data for all forms of material.

Holding format block

0xx= Control information, numbers, codes

1xx= Not defined

2xx= Not defined

3xx= Not defined

4xx= Not defined

5xx= Notes

6xx= Not defined

7xx= Not defined

8xx= Holdings and location data, notes

9xx= Reserved for local implementation.

Authority Data format: It contains format specification for encoding data elements that identify or control the content related to authority control.

Authority format blocks

0xx= Control information, numbers, codes

1xx= Heading

2xx= Complex see references

3xx= Complex see also references

4xx= See from tracing

5xx= See also from tracing

6xx= Reference notes, treatment, notes, etc.

7xx= Heading linking entries 8xx= Not defined

9xx= Reserved for local implementation

Classification Data format: It contains format specification for encoding data elements related to classification numbers and caption associated with them.

Classification format blocks

0xx= Control information, numbers, codes

1xx= Classification numbers and terms

2xx= Complex see references

3xx= Complex see also references

4xx= Invalid number tracing

5xx= Valid number tracing

6xx= Notes

7xx= Index terms and number building fields

8xx= Miscellaneous

9xx= Reserved for local implementation

Community Information Format: It provides format specification for records containing information about events, programs, services, etc. so that this information can be integrated into other public access catalogues as data in other record types.

Community information format blocks

0xx= Control information, Numbers, Codes

1xx= Primary names

2xx= Titles, Addresses

3xx= Physical information, etc.

4xx= Series information

5xx= Notes

6xx= Subject access fields

7xx= Added entries other than subject

8xx= Miscellaneous

9xx= Reserved for local implementation

2.2.3.1 Structure of MARC record

A MARC record consists of three main sections: the leader, the directory, and the variable fields.

The Leader

It consists of data elements containing coded information and it is identified by relative character position. The leader is fixed in length in a string of 24 characters, 00 to 23. It occurs in the beginning of each MARC record.

The Directory

It contains the tag, starting location, and length of each field within the record. It serves as road map of the data contents area. Directory information is dynamically gathered and stored in a place between the Leader and the Data contents sections. The Directory is generated programmatically by computer for locating data fields with the help of their address, which is a string of 12 numeric characters. The size of directory area varies depending on the number of times the address repeats in the directory. The directory ends with a field terminator character.

Variable fields/Data Content

The data content of a record is divided into variable fields. MARC 21 format describe two types of variable fields, viz. variable control fields and variable data fields. Control and data fields are distinguished only by structure. The data fields are separated by the field terminator which is a pre-determined special character such #, @, etc. The data content resides in the final section of a Record and ends with the Record Terminator.

Variable fields and Tags

- The data in a MARC record is organized into fields, each identified by a three – character tag.

- The MARC 21 formats use only numeric tags.
- The tag is stored in the directory entry for the field, not in the field itself.
- Variable fields are grouped into blocks or according to the first character of the tag, which identifies the function of the data within a record, e.g., main entry, added entry, subject entry. The type of information in the field, e.g., personal name, corporate name, or title, is identified by the remainder of the tag.

Variable control field

- The 00x field in the MARC 21 formats are variable control field.
- It consists of data and field terminator. It does not contain indicators and sub-field codes.
- It contains either a single data element or a series of fixed length data elements identified by relative character position.

Variable data field

- All fields except 00x are variable data fields.
- Following four levels of content designation are provided for variable data fields in ANSI Z39.2:
- A three-character tag, stored in directory entry
- Indicators stored in the beginning of each variable data field
- Sub-field codes preceding each data element
- A field terminator following the last data element in the field

2.2.3.2 MARC 21 Format

MARC Format involves the logical record structure, the content designation and the data content. Content designators, field tag, Indicator 1 and 2, and sub-field code, all contribute to a computer's performance in reading the content of a bibliographic record meaningfully.

Field Tag: The Field Tag is a three-digit code meant for a particular type of data. For example, Tag 100 stands for main author.

Indicators: There are two Indicators, viz. Indicator 1 and Indicator 2. These provide supplementary information about the field content. Each indicator holds single -character code. The code may be a numeric or a lowercase alphabetic character or a blank space. Use of a blank (#) indicator is inconsistent.

Subfield Code: It identifies data elements within a field for enabling the computer to manipulate each one separately. It is composed of a sub-field delimiter and a Data Element identifier. A delimiter's function ends with passing a signal to computer predicting the presence of a Data Element Identifier, while Data Element Identifier is a Code.

Example

245	Title Statement	NR
$a	Title Proper/Short Title	NR
$b	Remainder of Title	NR
$f	Designation of Vol./Issue and /or date	NR
$h	Medium	NR
$6	Linkage	

Examples of sub-field codes with Dollar Sign as subfield delimiter.

Variable Control Fields

The first block of fields is made under tag 00X that, contains Variable Control Fields, e.g., 001 is control number.

Variable Data Field

All fields except 00X are variable data fields. These fields consist of indicators, one or more sub-field codes, Variable data and a field terminator. The primary groupings of variable fields are as follows:

0XX = Control information, numbers, Codes

1XX = Main entry

2XX = Titles, edition, imprint

3XX = Physical description, etc.

4XX = Series Statements

5XX = Notes

6XX = Subject access fields

7XX = Name, etc. added entries or series, linking

8XX = Series added entries, holding and location

9XX = Reserved for local implementation

All fields are not required by every library. Therefore, a policy may be formed to concentrate on a set of relevant fields, indicators, subfields. The minimum required fields for book cataloguing may look something like the following:

020 ISBN

040 Cataloguing Source

09X Local call number

100 Personal Name – Main entry

110 Corporate Name – Main Entry

130 Uniform Title – Main entry

240 Uniform Title

245 Title of the work

246 Varying form of title

250 Edition Statement

260 Imprint, Publication, Distribution

300 Physical Description

440 Series Statement/Series Title Added entry

500 General Note

504 Bibliographic Note

505 Formatted contents Note

520 Summary Note (abstracts, etc.)

59X Local Notes

600 Subject Added entry – Personal

630 Subject Added Entry -Uniform Title

650 Subject Added Entry – Topical

651 Subject Added Entry – Geographic

69X Local Subject Access field

700 Personal Names – Addition Access Point

710 Corporate Name – Addition Access Point

730 Uniform Title – Addition Access Point

9XX Local data Elements

Example:

010		91-12500/Ac
020		0452010616: # C $ 9.95 ($12.99 cm)
082		00822.33
100	1	Westall, Robert
245	14	The kingdom by the sea/ #c [by] Robert west all
250		1st American ed.
260		New York: # b Farrar Straus Giroux, # c 1992, e 1990
300		175P; # c 21cm 520 During World War II, twelve-year-old Harry and a stray
		dog travel through war-torn England in search of safety
650	1	World war, 1939-1945 # Z England # v Fiction
650	1	Dogs # V fiction

2.2.4 Summary

Catalogue helps the reader and the library staff to find the availability of documents in the library. The objective of the catalogue is to enable a patron to find a book of which either, the author, or the title, or the subject is known. The catalogue codes describe the rules for writing the name of the author (i.e., Personal author and Corporate author). The subject heading for any document may be assigned in the catalogue entry with the help of subject heading list (like Sears list of subject heading). To exchange the bibliographical record, it is required that international standard must be followed. MARC is an international format.

2.2.5 Exercise

1. What do you mean by Corporate Author?
2. Explain the structure of MARC Record?
3. Differentiate between see reference and see also reference in Sears List of Subject Heading (SLSH)?
4. Explain the principles that guide the indexers in the choice and rendering of Subject heading through SLSH?
5. Explain bibliographic data format in MARC21?