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Lesson No.

COLON CLASSIFICATION

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**INTRODUCTION TO COLON CLASSIFICATION AND
STEPS IN CLASSIFICATION**

Objectives :

The library classification is the basic tool for organizing and exploring the documents stored in a library. The Colon Classification (CC) designed and developed by Dr. S.R. Ranganathan, is based on the sound theory of library classification. After reading this chapter you will be able to :

- * *Get an overview of Colon Classification and its various versions*
- * *Notation used in the Colon Classification*
- * *With practical procedure of assigning class numbers*
- * *Ranganathan's famous **Nine** steps for practical classification*

The colon classification is a general library classification scheme and was devised by the Indian doyen of Library Science and the father of the Library Science in India Padamshree Dr. S.R. Ranganathan (1892-1972) in 1924-1933. It was first published in 1933 with 127 pages of rules, 133 pages of schedules and an index of 106 pages after having been tried in the Madras University Library. The theory of library classification underlying it has been the subject of much of Ranganathan's considerable writings. But the chief sources of content are to be found in the Ranganathan world famous work '*Prolegomena to Library Classification*'. (1937, 1957, 1967)

Theory Behind Colon Classification

Ranganathan was the first classificationist in the history of Library classification in the world who gave a detailed and scientifically sound account of the theory behind a scheme of classification. These theories are described in his pioneer work on classification '*Prolegomena to Library Classification*' first published in 1937. The prolegomena has gone through three major revisions. The third edition was published in 1967. Ranganathan developed Colon Classification scheme on the basis of Canons (i.e., canon of characteristics, canon of array, canon of chain, canon of filiation sequence, canon of terminology, canon of notation, canon for knowledge classification, and canon of book classification), Principles and Postulates pronounced by him. The Canons of classification are provided in the '*Prolegomena to Library Classification*' and the Principles and Postulates of helpful sequence are given in the '*Prolegomena to Library Classification*' and '*Elements of Library Classification*'. The postulate of fundamental categories, which forms the basis of Colon Classification is a result of his dynamic theory of classification.

Brief account of the various version of Colon Classification

First Edition (1933)

The first edition of CC was published in 1933. It had three parts : Part-I contained rules explaining the underlying principles; Part-II had the schedule and Part-III was the Index. Mixed notation was used comprising 26 Roman capital letters denoting main

class, Indo-Arabic numerals and Roman lower case letters. Each main class was provided with a facet formula. Colon (:) was used as connecting symbol for joining different facets.

Second Edition (1939)

The second edition was published in 1939. In this edition, two new concepts of octave principles and auto-bias was introduced. It used, for the first time, the concept of fundamental categories (personality, matter, energy, space and time). A new main class - Spiritual Experience and Mysticism was added. Apart from the earlier three parts, a fourth part was added which contained about 3,000 examples illustrative of the rules given in the first part.

Third Edition (1950)

The third edition was brought out in 1950, which was based on the Dynamic Theory of Library Classification. It was based on the postulates of Five Fundamental Categories:

- Personality (P)
- Matter (M)
- Energy (E)
- Space (S)
- Time (T)

Each fundamental category was assigned an indicator digit for connecting the various facets.

Fourth Edition (1952)

The fourth edition was published in 1952 with the introduction of concepts of rounds and levels. The concept of five fundamental categories was used in concrete manner and each category was given a different connecting symbol i.e., Comma (,) for personality, Semicolon (;) for matter, Colon (:) for energy and Dot (.) for space and time.

Fifth Edition (1957)

Fifth edition published in 1957 made many substantial changes in the rules as well as in the schedules of the Management and labour, Agriculture, Fine arts, Geographical isolates for India, and Law. Empty and emptying digits replaced the Greek letters introduced in the fourth edition. The second level of space and time were introduced.

Sixth Edition (1960)

The sixth edition was published in 1960. Substantial changes were made in the various schedules. The following schedules were revised:

- Education
- Nuclear physics and nuclear engineering
- Common energy isolates
- Second level of space and time isolates

The Chapter-6 on contractions, Chapter-7 on classification, and Chapter-8 on principles and postulates were added. In the schedules the concepts of Phase relation, Intra-facet relation and Intra-array relation were also introduced. The sixth edition was reprinted in 1963, with some important amendments. The major changes was the

introduction of an indicator digit - the inverted comma (') instead of the dot (.) for the time facet. The annexure 19-28 with major changes were incorporated.

Seventh Edition (1987)

The seventh edition of the colon classification revised by M.A. Gopinath was published in 1987. This edition came out after the death of Ranganathan (24th September, 1972) with major changes. However, the index for the edition has not been brought out so far hence it is very difficult to use. Index is now available on a CD-ROM.

NOTATIONAL SYSTEM

Colon classification used mixed notation to represent the classes. The following notations are used in the CC.

10	Indo-Arabic numerals (0-9)
26	Roman Alphabet (capital letter A-Z)
23	Roman Alphabet (small letters excluding i, l and o)
01	(Greek letters Delta)
02	Parenthesis (circular)
06	Punctuation marks as connecting symbols (, . ; : ' and -)
02	Arrows (backward and forward)

STEPS FOR PRACTICAL CLASSIFICATION

Dr. S.R. Ranganathan has recommended a procedure for practical classification based on postulates and the associated principles enunciated by him. This whole procedure consists of eight steps (CC P1.7), which should be methodologically followed by a beginner in classification until he gains experience and an insight in the art and science of classification.

The following are the eight steps :

Step 0	Raw title
Step 1	Full of Expressive title
Step 2	Kernel title
Step 3	Analyzed title
Step 4	Transformed title
Step 5	Title in standard form
Step 6	Title in facet number
Step 7	Title in synthesized (Class Number)
Step 8	Verification

Let us try to understand these steps with the help of an example.

Step 0. Raw Title

Raw title is the title given on the title page of the book or on the first page of, or cover page of the document. In an examination situation usually the books are not given for classification only the title will be given. These given title are to be considered as given titles.

Step 1. Expressive Title

From the Raw Title by filling up ellipsis such as Basic Class or any other facet implied in the Raw Title, breaking down composite terms into their fundamental

constituent terms according to some principle which sets a limit to the semantic depth beyond which one should not go to get the fundamental terms.

Step 2. Deriving the Kernel Title

From the Expressive Title by omitting all the auxiliaries and puffs, and replacing in the nominative singular form all the substantive words - retained.

Step 3. Deriving Analyzed Title from the Kernel Title

By marking the Basic Class and inserting against each of the other Kernel Terms symbols for the Fundamental Category of which it is deemed to be a manifestation and amplifying the symbol for each Kernel Term by prefixes and suffixes to indicate the Rounds and Levels to which they belong. This is done essentially with the help of the Wall-Picture-Principle, taking two Kernel Terms at a time.

Step 4. Deriving Transformed Title from the Analyzed Title

By rearranging all the facets according to the symbols put against them and according to the postulates for Facet Sequence.

Step 5. Deriving the title in standard terms from the Transformed Title

By replacing any term, which does not belong to the accepted standard by its equivalent standard term.

Step 6. Deriving the title in Facet Numbers 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 already found in the schedule, its Isolate Number is constructed with the aid of the principles already mentioned.

Step 7. Deriving the Class Number from the title in Facet Terms

By removing all the symbols after each facet and inserting the Class Number.

Step 8. Making a facet analysis of the Class Number

Giving a digit by interpretation, and verifying the correctness of the number.

Examples :

Now let us follow this procedure of constructing the class number for the subject "Fluctuation of the value of gold currency in the Second World War".

Step 0. Raw Title

Fluctuation of the value of gold currency during Second World War.

Step 1. Expressive Title

In the raw title, the Basic Class 'Economics' is implied. This should be supplied. The isolate 'War Economics' of (P) is implied. This should also be supplied. The term 'Second World War' is a derived composite term. The fundamental constituent terms 'War Economics', 'World', and '1940' are to be taken as implied in it. So it must be broken into them. This is an example of an Elliptical Title. We, therefore, write down the expressive title as shown below: Fluctuation of the value of gold currency in War Economics in the World in 1940's.

Step 2. Kernel Title

The words 'of' and 'in' are preposition and the word 'the' is a definite article. They are only auxiliary words. They are not essential to the indication of the subject. We, therefore, omit them and write down the Kernel Title as shown below:

Fluctuation. Value. Gold. Currency. War Economics. Economics. World. 1940

Step 3. Analyzed Title

The Kernel term 'Economics' denotes the focus in the Basic Facet. Therefore, the symbol (BC) should be added after it. The kernel term '1940's' denotes the focus in the Time Facet. Therefore, the symbol (T) should be added after it. The kernel term 'World' denotes the focus in the Space Facet. Therefore, the symbol (S) should be added after it. The kernel terms 'Fluctuations Value' stands for 'Business cycle', they, therefore, denote the focus in the Energy Facet. Therefore, the symbol (E) should be added after them. The kernel term, 'Gold' denotes the focus in the Matter Facet. Therefore, the symbol (M) should be added after it. The kernel term 'Currency' stands for 'Money'. It, therefore, denotes the focus in the Personality Facet. This Facet becomes Second Level Personality Facet on the basis of the Principle of Telescoped Facet and, therefore, the symbol (P2) should be added after it. The kernel term "War Economics" denotes the focus in the Personality Facet. Therefore, symbol (P) should be added 1: after it. We, therefore, write down the analyzed title as shown below: Fluctuation Value (E) Gold (M) Currency (P2) War Economics (P) Economics (BC) World (S) 1940's (T). This is called facet analysis.

Step 4. Transformed Title

There is not more than one manifestation of anyone fundamental category. By the postulate of sequence, the facets to be arranged in the sequence (BC) (P) (M) (E) (S) (T). The arrangement of the facets thus arrived at, may be shown as below:

Economics (BC),
War Economics (P),
Currency (P2),
Gold (M),
Value Fluctuation (E)
World (S) 1940's (T)

Step 5. Standard Terms

Economics (BC), War Economics (P), Money (P2), Gold (M), Business Cycle (E), Value Fluctuation, World (S), 1940's (T).

Step 6. Title in Facet Numbers of Focal Numbers

X (BC) B (P) 61 (P2) 1 (M) 74 (E) 1 (S) N4 (T)

Step 7. Class Number or Title in Synthesized Focal Number

XB, 61; 1: 74.1 'N4

Step 8. Digit-by-Digit Interpretation

In this step, we have to give digit-by-digit interpretation of the class number as shown below :

X	=	Economics
XB	=	War Economics

XB,	=	[Transition to the next (P2)]
XB, 6	=	Credit transactions in War economics
XB, 61	=	Money transactions in War economics
XB, 61;	=	[Transition to next (M)]
XB, 61; 1	=	Gold currency in War economics
XB, 61; 1:	=	[Transition to the next (E)]
XB, 61; 1:7	=	Value of gold currency in war economics
XB, 61; 1:74	=	Business cycle of gold currency in war economics (Fluctuation of the value of gold currency in war economics)
XB, 61; 1:74.	=	[Transition to the next (8)]
XB, 61; 1:74.1	=	Business cycle of gold currency in war economics in the World.
XB, 61; 1:74.1 '	=	[Transition to the next (T)]
XB, 61; 1:74.1 'N	=	Business cycle of gold currency in war economics in the world in the 20th century.
XB, 61; 1:74.1'N4	=	Business cycle of gold currency in war economics in the World in the 1940.

Which is the same as 'Fluctuation of the value of gold currency during the Second World War'.

Further Reading ;

1. Ranganathan(S.R.): Colon Classification. Ed. 6. Bangalore: Sarda Ranganathan Endowment for Library Science, 1960. Reprint 1963.

Lesson No. : 1.2

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COMMON SCHEDULES

Objectives :

In this chapter, we will discuss the various common schedules as given in Colon Classification for constructing the class numbers. These common schedules are applicable to all basic class as given in Colon Classification. By reading this chapter, you will be able to :

- * *Understand the nature and properties of Common categories of Space and Time*
- * *Make isolate numbers for Space and Time*
- * *Make use of Common Schedules of language*

An isolate is a smallest subdivision (unit) of knowledge in the Colon Classification (CC). The isolates are of two kinds: Common Isolates and Special Isolates. Common Isolates, which are applicable to every main class and its class number, are the manifestations of the mode of expression or the physical media of documents. These are not subject divisions. Since these remain the same for every subject, so their schedule has been given once for 011 on pages 2.5-2.6. But the special isolates are different and unique for every subject. Hence the name special isolates. Isolates under all the Five Fundamental Categories are special isolates. But the isolates belonging to the categories of Space and Time remain as such whatever be the subject. They do not change from subject to subject. Therefore the isolates of these two categories remain the same. It is the case with the Language isolates. Their names and isolates numbers are the same both under the main classes O Literature and P Linguistics. These can also be used as such in the Book Numbers. Hence the name common schedules. In such schedules isolates are used as they are enumerated. While in some cases the isolates for these schedules have to be sharpened or constructed a new by the use of the devices. Schedules of Space Isolates, Time Isolates and Language Isolates are applicable as such wherever required. Therefore, they have been enumerated once for all. In such schedules many isolates are used as they are enumerated, while in other cases the isolates have to be constructed by the use of the devices.

(A) SPACE ISOLATES

It is a common facet attachable wherever warranted. Its indicator digit is apostrophe. Its isolates have been enumerated in Chapter-4 of the schedules (pp. 2.8-2.17 and p.26 of the Annexure). Rules for applying them and constructing or sharpening Space Isolates (wherever necessary) have been given in Chapter-4 of the Rules (pp. 1.51-1.53 and pp. 20-23 of the Annexure).

Space Isolates occur in two levels [S1] and [S2]. Isolates in [S1] are denoted by numerical digits (of course decimal in character); whereas [S2] isolates are denoted by small alphabets and numerical digits, if necessary. First Level division of the earth is Political (Asia, India, Punjab). Zonal (equatorial, tropical). Directional (East. South East. West) and population and administrative units (village, town, and city).

The digit 1 stands for the world as a whole, which has further been divided by zones and orientation. The digit 2 stands for the Mother country and 3 for the Favored country. The digits 4 to 8 represent the various continents, which have further been divided into countries. The last digit 9 represent the various islands and the oceans. But apart from these enumerated isolates many more can be constructed by (SD) (Muslim countries, Gold mine countries, Rice producing countries, for example). (CD) (League of Nations, SARRC, NATTO, G-8 countries, for example) and (SID) (French Empire, British Empire, Maratha Empire, for example).

Super Imposition Device (SID) is employed to construct an isolate number for an empire having colonies in different and scattered areas of the world. The dominated area comes first and the dominating nations comes later.

British India

44-56

British Colonies in the World

1-56

French Africa

6-53

Colonial America

73-56

Subject Device (SD) is used to represent areas of the world having a common characteristic. For example, Agricultural countries, Under-developed countries, Oil Producing countries, Christian countries, English speaking countries, European monarchies. This is done usually by sharpening or employing the appropriate area by the (SD):

English speaking countries of the world

1 (P111)

English speaking countries of Europe

5 (P111)

Catholic Europe

5 (Q62)

European Monarchies

5 (W4)

Rice Growing States of India

44 (J381)

Communist Countries

1 (W691)

(SID) and (SD) may also be used in succession, if need arises, though in the schedule there are no specific instructions for this:

Rice Growing States in British India

44-56 (J381)

Sparsely populated areas of French Africa

6-53 (Y:581)

Chronological Device (CD) is employed to get the isolate number for near sovereign international organizations. This is done by sharpening the appropriate area by (CD) :

League of Nations
IN
SAARC (1995)
4N8
CENTO Central Treaty Organization (1967)
1N67
Council of Europe (1949)
5N49
Association of South East Asian Nations
43N67
Organization of African Unity (OAU 1963)
6N6
Organization of American States (1948)
7N48

(CD) and (SD) may also be used together : Communist Member Countries of UNO

IN4 (W691)

Similarly,

European Members of the UNO

IN4-5

The isolate number for population clusters such as, City Tehsil, Village, if not enumerated is got by Alphabetical Device (AD). The method of applying (AD) here is a bit different. A dot "." is put between the appropriate upper area and (AD), (Rule 4B Annexure)

Punjab	4443 or 4436
Amritsar city	4443.A or 4436.A
Ludhiana	———— 4443.L or 4436.L
Chennai city	4411.C
Paris	———— 53.P
Zurich	594.Z

Any geographical area may further be subdivided by orientation as the division of 1 world, by orientation divisions given from 19A to 19Y. It means that an orientation division is attached to any area with a dot "." and Orientation number after deleting the initial digit 1

East Europe	5.9 B
Central Punjab	———— 4443.9 D or 4436.9D
East of Amritsar	———— 4443.A.9 B or 4436.A.9B

If the orientation division of any area is given by enumeration, then it must not be got by synthesis. For example, since North America is enumerated as 71, so to get its

number by synthesis as 7.9 S is wrong. Similarly, South East Asia is 43 enumerated so to make its number, as 4.9F is wrong.

Isolate number for a greater Metropolitan city is to be got not from the division of the state to which it belongs, but by the division of the country itself :

Bombay	44.B
Inside of Bombay	44.B.9 X
Kolkata	44.K
West Kolkata	44.C.9K

One more important point to be noted is that for India, two schedules for Space Isolates have been provided. Not it is better to use the schedule marked as "After 1956". It begins at First column of the page 2.12.

The Second Level [S2] representing physical features of the earth obviously comes after the First Level: and its isolates have been enumerated at page 26 of the Annexure. The indicator digit for [S2] is also the dot "."

Rainfall in Forests	U 2855.f
Sea Travels	U8. r
Fauna and Flora of Forest	G: 12..f
Fauna and Flora of Indian Forests	G: 12.44.f

[S2] may be sharpened by (AD) in case of specifically named physical features. But here [S1] should be as broad as possible.

Plants of Gangetic Valley	I: 13.44.g1G
Travels in Himalayan Mountains	U8.4.g7H
Weather forecasting in Nilgiri Hills	U2891.44.g.7N
Gobi Desert-Geography	U.41.d.G
Nile River Gebgraph	U.6.p1N

Space Isolates impersonate as Personality Isolates in canonical classes NA to NR. V (History) and Z (Law), and also in Common Isolates, whenever a Geographical Isolate officiates as personality, its indicator digit must be changed to comma from dot. For example:

History of Chennai City	V4411.C
Amritsar in 1939	4436.A'N39 or V4443. A'N39

(B) TIME

Isolates for the Time facet have been enumerated in Chapter-3 of the Schedule (page 2.7). The rules for using and constructing them (if necessary) have been given in Chapter-3 of the Rules (pages 1.49-1.50). Time facet occurs in two levels. [T 1] is the chronological Time period and [T 2] is the cyclical Time known as featured Time.

[TI] is denoted by Roman capitals followed by Indo-Arabic digits. The first digit A stands for Geological Times. With the other digits from B to YC, we can represent any particular year or a span of time falling between 9999 BC to 3199 AD. This period has not been distributed averagely among the available digits, but by the principle of proportionate

allocation of digits. This method secures brevity in notation for the often-used isolate numbers.

A	:	Denotes Geological Ages
B-C	:	Denote Before Christ era
B	:	Represents the period from 9999BC to 1000BC; and
C	:	Encompasses the time from 999BC to 1BC. From the digit D onwards starts the present era, viz. A.D. era.
D	:	Represents the first thousand years, i.e., 1 to 999 AD, while from E onwards each digit represents a century:
E	:	Stands for the Eleventh Century;
K	:	Denotes the Seventeenth, while the twentieth century has been denoted by the digit N, and so on.

The CC can measure Time only up to a particular year, not up to the particular month or day as the UDC can. From the digits E to YC three digits represent each year. The first digit (the alphabetical letter) represents the century; the first numerical digit (or the second digit in general) denotes the decade and the last digit the year particular. For example:

1526 A.D. is denoted as J 26

J stands for the 16th century

J2 stands for the 3rd decade of the 16th century and J26 stands for 1956, the exact year.

Similarly, the year 1901 AD is indicated as N01; 1800 AD as M00, and 1851 as M51. The 1880 are represented as M8. Nineteen-twenties (1920's) are denoted as N2, very obviously.

But in case of D, any year, belonging to the first millennium AD, is indicated by four digits in total-one alphabet and three numerical digits. The first digit denotes 'the millennium, the second digit, (the first numerical digit) the century, third the decade, and fourth the year exact. 212 AD is indicated as D212. 5AD is denoted as D005 and 110AD is denoted as D110 and 10 AD is denoted as D010 and so on. The sixth century is indicated as D5 and Tenth by D9. Similarly, we can denote any decade falling between these centuries, D65 represents the sixth decade of the seventh century AD.

BC TIME-ERA

But the BC time cannot be denoted as easily. Complication arises out of the fact that we measure BC time from the opposite direction it flows. To arrange books in the increasing chronological order, Ranganathan devised, what he calls the Method of Complements. This method consists in subtracting the year to be denoted from the higher numerical limit (actually the lowest point) denoted by that digit. Say, we wish to denote 1200 8C; the period of 1200 8C is covered by the span represented by the digit 8. The highest 11th, (actually the lowest) represented by B is 9999 BC, so to denote 1200 BC, it must be subtracted from 9999. Thus 1200 BC is denoted as (9999-1200) B8799. Similarly, 5000 BC is denoted as B4999; 6000BC is denoted as B3999, and so on, similarly 999 BC is indicated as C000, 10 BC is indicated as C989 and 5 BC is indicated as C994.

Though B8799 does not reveal as easily that it denotes 1200 BC as easily J64 reveals that it is 1564 AD, but this is the only simple method to maintain the strict chronological order.

Effective Decade : In many cases, especially in social sciences, the indication of the exact year of time is meaningless and unnecessary. Decade is an arbitrary division, convenient only for calculations. There is nothing intrinsically social in it. The effective unit to measure social change seems to be a generation which consists of two decades. Ranganathan terms a period of two decades as an Effective Decade. He postulates that the 2nd, 4th, 6th, 8th and 10th decades denoted by the digit 1, 3, 5, 7, and 9 respectively are the Effective Decade numbers. To clarify further, a table is given below on the use of Effective Decade:

Actual Decades Digits	Span of Years of the Century	Effective Decade Digits
0 or 1	0-19	1
2 or 3	20-39	3
4 or 5	40-59	5
6 or 7	60-70	7
8 or 9	80-99	9

To illustrate, Effective Decade for the 1981 is N9: for the (ED) for 1900 AD is N1: and for 1859 it is also M5: and for 1841 it is also M5. The above table will help. There are CC many cases where the rules in the CC prescribe the (ED). This has been discussed under the Chronological Device (CD). The Latest Effect Decade is denoted as (LED) accordingly.

Second Level Time Facet : [T2] stands for the seasonal, for metrological or diurnal times. The indicator digit for [T2] is the same as that of [T1] - the apostrophe:

Cow Feeding in Winter

KX 311: 1 'n7

Human migration in Snow Times

U42 'p8

Humidity in Rainy Season of 1995

U285 'N95 'p5.

[T] is mostly used in U Geography.

In case of Paleontology, Paleobotany or Paleozoology, Time is not to be taken from the Chapter-3, but from the canonical class H5 Stratigraphy. In this case H5 is to be replaced by A. In the schedule of Time Isolates (Chapter-3 p2.7) the digit A stands for Geological periods but it has been that no contradiction arises by this method. The isolates thus become 85, the extension of the digit A of the Time Schedule.

Silurian Paleozoology

H6 'A23

(Here Silurian is H523. since H5 is to be replaced by A so H523 = A23)

Similarly Cainozoic Plants

I: 8 'A4

The cases where Time Isolates function as Personality have been discussed under the heading Chronological Device (CD) given elsewhere.

IT MAY BE NOTED THAT THROUGHOUT THE CC 6TH ED SCHEDULE THE TIME FACET HAS BEEN INDICATED BY A DOT SINCE 1963. THE INDICATOR DIGIT FOR TIME FACET HAS BEEN CHANGED TO APOSTROPHE. THEREFORE, THROUGHOUT THE RULES AND SCHEDULES OF THE CC THE DOT SHOULD BE REPLACED BY AN APOSTROPHE IN CASE OF TIME FACET.

(C) LANGUAGE SCHEDULE

A particular language forms the personality facet in O Literature and P Linguistics: and Language Isolates are also used in the Book Number. Therefore, Ranganathan, has enumerated them once for all in Chapter-5 of the schedules (pages 2.26-2.27). Some of the major families of languages have been enumerated from isolate numbers 1 to 3. Enumeration of individual members of these families is fairly detailed. But the enumeration is limited to the languages most known and spoken by a large number of populations. In enumeration, not only many individual languages have been altogether omitted. But many families of languages have been altogether omitted without a trace. There are, of course, some rules to provide isolate numbers to such unenumerated languages.

1. Indo-European Languages
2. Semitic Languages
3. Dravidian Languages
- 4-9 Other Language to be got by (GD)
- 99 Artificial Languages to be got by (CD)

If a language definitely belongs to any family denoted by 1, 2 or 3 or their sub-divisions, but not enumerated they may be got by adding 9 to the approximate language number and it should be further sharpened by the (GD).

For example, Rumanian Languages has not been enumerated in the schedule - it belongs to the sub-family of Latin Languages. Thus its isolate number may be got as :

12+9+5921 Area number of Rumania = 1295921

Similarly,

Bihari (it belongs to the Sanskrit sub-family)
15+9+4473 = 1594473

Baluchi (it belongs to Iranian sub-family)
16944Q75

Czech
1495925

Serbo-Croatian
149523

Breton
128923

Yiddish (Teutonic language spoken by Jews)
1194653

Mrikaans (Teutonic sub-family)
11963

Maltese (Semitic sub-family spoken in Malta)
295292

Coptic (Semitic sub-family spoken in Egypt)
29677

Languages not belonging to the above families are got by (GD)

Japanese Language
42

Korean Language
495

Australian
8

Siho (Spoken in North Western China)
41

Nakhi (Spoken in Yunnan Province of Southern China)
4141

Burmese
438

Thai
433

Malay
435

Indonesian Language
436

Delaware
7314

Fijian
9368

Burmese Language (it belongs to Sino-Tibetan family)
since this family has not been enumerated, so it is got by (GD)
438

Hungarian
5932

Khmer (National Language of Cambodia)
4315

Quite a good number of isolates for artificial languages have been enumerated:
others may be got by (CD)

Occidental (1922)
99N2

Novial (1928)
99N28

International Picture Language (1931)
99N3

Interglossa
99N4

All the languages have been at different stages caused by time, and variations caused by distance. The latter phenomenon is known as dialects of languages. Ranganathan has provided elaborated rules to provide numbers for stages or dialects. These have been discussed in the chapter on P Linguistics.

Further Readings

1. **RANGANATHAN (S.R.)**. Colon classification. Ed. 6. Bangalore: Sarda Ranganathan Endowment for Library Science, 1960.
2. **KAULA (P.N.)**. A treatise on colon classification. New Delhi: Sterling Publishers, 1985.
3. **RANGANATHAN (S.R.)**. Elements of library classification. Ed. 3. Bangalore: Sarda Ranganathan Endowment for Library Science, 1989.
4. **SATIJA (M.P.)**. Manual for practical colon classification. Rev. Ed. 3. New Delhi: Sterling Publishers, 1995.
5. **SEWA SINGH** : Colon classification.: New Practical Manual. Delhi: B R Pub.2006

Lesson No. : 1.3

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COMMON ISOLATES

Objectives :

The provision and application of the Common Isolates (CI) in Colon classification is the beauty of construction of class numbers systematically. By reading this lesson you will be able to:

- * *Understand the conceptual and practical application of the common isolates in classifying the documents.*
- * *Understand the difference between Anteriorising Common Isolates (ACI) and Posteriorising Common Isolates (PCI).*
- * *Understand the connecting digits and facet formula applicable to common isolates.*
- * *Make use of common isolates scientifically and systematically.*

An isolate in the CC is a fundamental and ultimate unit of knowledge. By itself it cannot stand: so alone it cannot make a subject. Isolates enumerated specially and exclusively for a particular main class are termed Special Isolates. In contrast to these, isolates enumerated once for all and which remain the same for every main class are veritably termed as Common Isolates.

It may be stated that the Common Isolates (CI) are mere auxiliaries, and not part of the subject proper. They are recurring concepts and mostly pertain to the form of presentation taking into view the extra-textual considerations. Since they are listed once for all, their names and notational symbols remain the same wherever they occur. The DDC aptly called them Form Divisions and now more appropriately as the Standard Subdivisions as they have been renamed lately. Of the common isolates Ranganathan maintains that they are attachable to most of the classes, *though not all*. They stand for divisions such as encyclopaedia, dictionary, periodical, bibliography, statistics or forms of presentation such as history, commission report and conference proceedings. Institutions, research, criticism, are also Common Isolates.

To arrange the subjects in a real **Apupa Pattern**, much depends upon these Common Isolates. These form divisions impart shades of various intensity to the core of a subject rather, without Common Isolates there can be no Apupa Pattern. Not only this, with even one kind of Common Isolates, as in the case of DDC, there cannot be the real Apupa pattern.

Ranganathan divided the Common Isolates into two categories and further sub-categories, which may be best represented diagrammatically as on page 32.

Broadly speaking they are of two kinds :

- 1) Anteriorising Common Isolates (ACI)
- 2) Posteriorising Common Isolates (PCI)

(ACI) : When attached to a subject they give it an anterior position over other subjects of the same class. Their another feature is that they do not require any connecting symbol. Documents attached with anteriorising Common Isolates form the approach documents on the shelves.

A. (ACI) attachable before Space :

Dictionary of Library Science
2k

Dictionary of Library Classification
2:51K

Dictionary of Colon Classification
2:51N3k

2k, 2:51k and 2:51N3k will file before 2, 2:51 and 2:51N3 respectively (Rule 0251 page 1.6). (ACI)s have their own facet formula fitted with first and second levels of Personality:

Class number ACI [P₁], [P₂]

The symbols for the (ACI)s and their facet formula have been given at pages 2.5 and 2.6 of the schedule, while the rules for applying them have been given on pages 1.43 to 1.47.

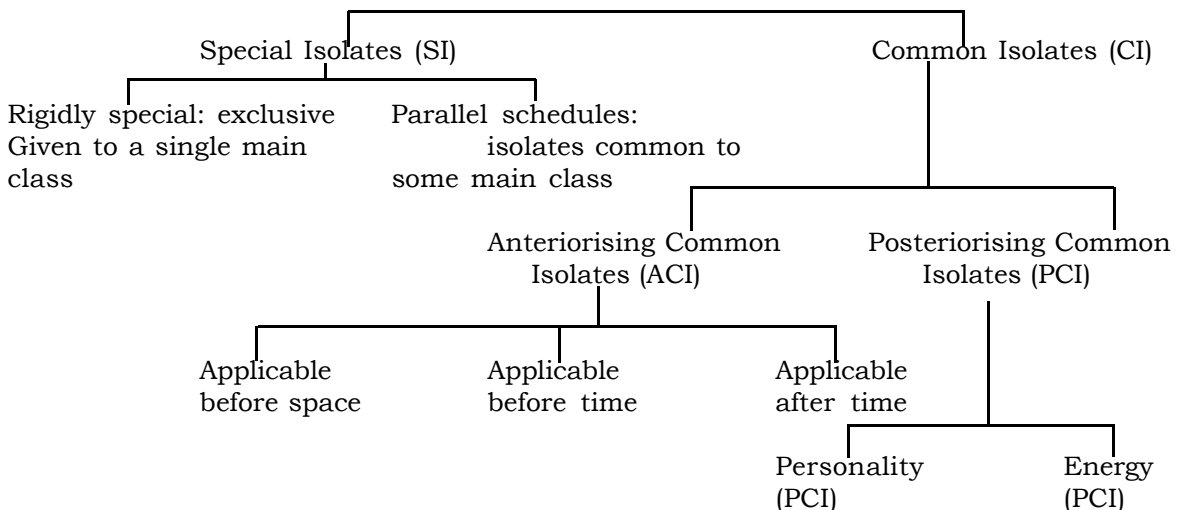
Generally [P₁] is the area of purview or the locality of origin to be got by (GD). [P₂] is the epoch of origin to be got by (CD). While applying (CD) only the minimum digits are required for individualizing. But in the (ACI) formula, if there is only first level of personality then it is to be got by (CD), instead of (GD).

Bibliography on Shakespeare brought upto 1981
0111, 2J64aN9
Geographical Atlas (1970)
UfN7

(Here [T] is to be got by the (LED))

Herald of Library Science, India, 1962+)
2m44, N62

IASLIC Bulletin
Isolates



(Let us suppose that both of them were started in the year 1957)

Their class numbers respectively are

2m44, N57

2m44, N 57, 1

(Rule 21m3, page 1.46)

History of Indian Librarianship brought upto 1950's

2v44 'N5

In case of w biography, w is to be fitted with [T], to be got by the exact year of birth in case of an individual's biography, and with (LED) covered in case of collective biographies.

Biography of Ranganathan

2wM92

Life of Charles Darwin

GwM09

In case the biographee happens to be a protagonist, rather than a theoretical writer, the w is to be replaced by y7.

Life of Nehru

V44y7M89

Life of Hitler

V55y7M92

Life of Harold Laski

WwMS2

Life of Eva Braun (Mistress of Hitler)

V55y7M92

(She will get the class number for the biography of Hitler. It is presumed that someone will be interested in her life only for the sake of Hitler, so both the biographies will get the same class number).

If the Time Facet is already included in the class number, it may not be repeated. It will happen usually in case of O Literature:

Life of John Keats

O111, 1L92w

Biography of Shakespare

O111, 2J64w

Similarly, in case of collected works:

Collected works of Ranganathan

2xM92

Collected works of Melvil Dewey

2xM51

Biographies of Indian Biologists (youngest born in 1939)

Gw44, N3

Works of British Mathematicians (youngest born in 1945)

Bx56, N5

B. Applicable after Space Facet

Indian Economic Tables started in 1970

X.44sN

(Only minimum digits are to be used for individualizing)

C. Applicable after Time Facet

Report of the Advisory Committee on Libraries (India, 1957)

2.44 'NS7t

Indian Labour Statistics for 1950's

X : 9.44 'N5s

Whenever warranted' two (ACI)s may be applied in succession:

Library Science Abstracts

2am

Bibliography of Library Science Periodicals brought upto 1970

2 maN 7

Indian National Biography (Started, say in, 1969)

wn44, NG

Posteriorising Common Isolates (PCI)

As contrasted from the (ACI)s, (PCI)s are quite different. Firstly, they give posterior position to the document to which they are attached. It means a class number fitted with a (PCI) will come after the same class number without it. Secondly they require a connecting symbol for their attachment. They are of two kinds :

- 1) Energy (PCI)
- 2) Personality (PCI)

A) Posteriorising Energy Common Isolates are attached with a Colon:

Literary Criticism

O : g

Experiments on the velocity of ultra violet light

C52 : 21 : f3

Research in Colon Classification

2 : 51N3 F

Weighing Cases

C 28 : c1

Surveys for Cycle Exports

X 8 (D 5125) : 545 u

B) Personality Posteriorising Common Isolates, attached to any class number with a comma, mostly pertain to institutions and associations. They are enumerated at page 2.6 of the schedules, and the rules for applying them are given at page 1.48. They are applicable after the Space Facet and the formula for them may be put as :[MC]. [Space], b/w, [P₁], [P₂] : [E]

[MC]. [Space], PCI digit, (AD) or 9 (CD), [P₂] : [E]

Here [P₁] is to be got by (AD) in case of a localized body. But in case of a non-localized body [P₁] is to be got by (CD) but 9 should precede it. [P₂] and [E] are the same as that of V History.

Medical Profession in India

L.44, b

Profession of Homeopathy in India

LL.44, b

Institution of Bankers in India (1901)

X 61.44, d, 9 N 01

Functions of the Principal of Khalsa College of Education, Amritsar

T.4443, e4, K, 1 : 3

Here [P₁] has been got by (AD). [P₂] and [E] got from the main class V History.

International Council of Scientific Unions (ICSU)

A. 1, g, 9N

Election of the IASLIC President

24.44, g, 9 N 6, 1 : 91

(Here 1 and 91 have been taken from [P₂]

and [E] respectively of the (MC) V History]

Association of Commonwealth Universities

T 4.1N48, g, 9 N5

International Federation of Information and Documentation (FID)

2 : 97.1, d, 9M

It is also possible that a (PCI) and an (ACI) may be applied together in one and the same class number:

Annual Report of the Guru Nanak Dev University, Amritsar

T4.4443, d, Cr

Report of the Indian Mathematical Society

B.44. g, 9 Nr

Another very curious form of Common Isolates occurs in P Linguistics and Z Law. In [P₃] of P Linguistics the Isolate Numbers 11 and 15 and their sub-divisions have their own Common Isolates given at page 2.95 (first column). These Common Isolates are applicable there only, and nowhere else.

Nasal Consonants

P, 1508

Rolled velar consonants of modern English

P111, J15303

Similarly in [P₂] 5 of Z Law, 04 Abetment is attachable to all its sub-divisions:

Indian Law regarding abetment in breach of contract

Z 44, 5304

Indian Law for abetment of war crimes

Z 44, 5 ZA 04

Some more examples of common isolates are given below:

Collected poetry of Tagore

O157. 1 M 61x

Hindi short stories (by various authors, the youngest born in 1940)

O152, 3x N 5

Letters of Charles Darwin

GwM09, 4

Letters of Lord Alfred Tennyson (born 1809)

O111, 1 M09, 4

Annual Export Statistics of India

X: 545.44s N

DEVICES

Objectives :

The provision of the various devices in the colon classification for sharpening the class numbers is more extensively applicable other than classification tools. These devices provide autonomy to classifier and reduce the size of the schedule. By reading this unit, you will be able to :

- * *Learn the theory of various devices for making and sharpening isolates.*
- * *Learn the various types of devices used for sharpening the isolates.*
- * *Make some isolates by using these devices.*

CC class numbers are malleable and ductile. Ranganathan on the dint of his devices meant for sharpening the isolates or to create altogether new ones, always projected his scheme as a self-perpetuating one. It is quite doubtful (or debatable at least) whether any scheme in itself can be self-perpetuating. Nevertheless, these devices equip the scheme to finely individualize those class numbers, which order general enumerative schemes lump *en masse*. With these devices any isolate number can be made quite succinct to suit the occasion. These devices are:

- | | | |
|----|------------------------|-------|
| 1) | Chronological Device | (CD) |
| 2) | Subject Device | (SD) |
| 3) | Geographical Device | (GD) |
| 4) | Alphabetical Device | (AD) |
| 5) | Mnemonic Device | (MD) |
| 6) | Classic Device | (CLD) |
| 7) | Superimposition Device | (SID) |

These devices occupy a dominating place in the armoury of the hospitality devices for the CC. Their nature and use is explained below:

1) Chronological Device (CD)

It is the most widely and easily used device. It is applied where Time is a dominating or inherent factor in the entity. It consists in adding the epoch of origin to the ultimate Isolate or class number, whenever necessary or directed. In some cases an isolate may entirely be formed by the (CD).

In the CC all the system facets (SmF) are formed by this device, just by amplifying the (MC), (CC) or the appropriate class number, as the case may be. In case of systems of geometry the canonical class 86 is sharpened by (CD):

- | | |
|------|------------------------|
| B6M | Non-Euclidean Geometry |
| B6M3 | Elliptic Geometry |
| B6N | Line Complex Geometry |

Religious sects are also got by (CD)

- Q68J3 Baptist
- Q68L4 New Church
- Q68L6 Methodists
- Q78M9 Ahamadiya Muslims

System facets. In B Mathematics, C Physics, L Medicine, Q Religion, S Psychology, T Education, V History and X Economics, have all been got by (CD).

The places where (CD) is applicable have been indicated. Situations which can be coped with (CD) are very evidently suggestive. From the above examples, it should be clear that it is not necessary that the focus for (CD) should be pinpointed to the exact year. Too much precision may be superfluous and may unnecessarily lengthen the class number. For the sake of simplicity and brevity of notation, Ranganathan prescribes that "for the first isolate in an array, whose epoch falls within a century (or millennium) the first digit alone should be used". He writes further: "among the other isolates calling for the same first digit, the first isolate whose epoch falls within the same decade (or century) the first two digits should be used".² Situations where (CD) is to be got by (ED) or (LED) have also been indicated. This rule aims to achieve individuality in isolate numbers by using minimum number of digits as far as possible. This rule can be best illustrated by the examples of classification schemes:

- | | | | |
|----|-----|------------------------------------|--|
| | 1) | Dewey Decimal Classification | (1876) |
| | 2) | Cutter's Expansive Classification | (1891) |
| | 3) | Universal Decimal Classification | (1896) |
| | 4) | Library of Congress Classification | (1904) |
| | 5) | Colon Classification | (1933) |
| | 6) | Bliss Bibliographic Classification | (1935) |
| 1) | DDC | 2:51M | (Being the first scheme of the 19th century) |
| 2) | EC | 2:51M9 | (Being the second scheme of the 19th century) |
| 3) | UDC | 2:51M96 | (Being the third scheme of the 19th century:
and second of the 10th decade of the 19th century) |
| 4) | LC | 2:51N | (Being the first scheme of the 20th century) |
| 5) | CC | 2:51N3 | (Being the second scheme of the 20th century) |

As said earlier, the other major role of the (CD) is to create a new isolate altogether. For example :

- [P₂] in NA to NR Fine Arts
- [P₃] in O Literature
- [P₂] in P Linguistics
- [P₂] in (ACI) in many cases

Mughal Paintings

NQ44, J

Author facet in O Literature is always got by the Birth year of a particular author and in case of anthologies it is got by the (LED) covered:

John Keats

O 111, 1L92

George Bernard Shaw

O 111, 2M56

Prem Chand : Godan

O 152, 3M12, G

Anthology of Punjabi poetry

(The youngest author is 1949 born)

O153, 1xN5

In case of (ACI), [P₂] is got by (CD), subject to the rules 05813 and 05814 (p. 1.29), for the brevity of notation:

Library Journal

2m73, M

Soviet Encyclopedia

k58, N

American Men of Science

Awn73, N

All India Conference on Colon Classification (1962)

2:51N3p44, N62

But in case of collected works, biography, autobiography [P₁] is to be got by (CD)

Collected works of Ranganathan

2x M92

Biography of Ranganathan

2w M92

Also in Personality Posteriorising Common Isolates (PPCI),

[P₁] is to be got by (CD), though 9 precedes the (CD)

Indian Library Association

2.44, g, 9N

Indian Association of Information Scientists 1976

2.44, g, 9N76

2) Subject Device (SD)

It is a very potent device which classifier attempts to employ even at the slightest suggestion. Any part of the class number enclosed between parenthesis is the Subject Device part of the class number it may be considered analogous to the oft recurring instructions in the DDC (from the 18th edition onwards): "Add to... the numbers following in CC it is usually used whenever an isolate requires differentiation on a subject basis. Wherever (SD) is to be used, very clear instructions have been provided either in the schedules or sometimes in the corresponding rules. Even if not instructed, the situations where it can be employed are strikingly suggestive. It may be used to sharpen or to create a new isolate number in any of the facets. A great deal of discretion should be used in

applying the (SD). There is no difficulty in knowing where to apply (SD), but certainly in how to use it. If not instructed properly, one is always at a loss whether the (SD) being used should come [P] or [E] - both of them seem equal contenders.

For example (SD) has been used as personality in 24 Special Libraries, DO, S Electrical Engineering, R4 Ethics, S4 Vocational Psychology, T Education, X8 Industry, V:19 Foreign Policy, and Z Law.

24 (Z)	Law Libraries
D6, 8(B)	Computers
S4 (L)	Psychology of Doctors
V44: 19(X)	India's Foreign Economic Policy
X8 (J)	Agricultural Economics
Y73 (Q7)	Muslim Society
Z(Q6)	Christian Law
T: 3(B)	Teaching of Mathematics
2: 51, 9(X)	Library Classification of Economics

In G:3, [2M] is to be got by (SD)

Effect of Tea on the Living Organism

G : 3 ; (J451)

When a subject is applied over another, then it comes as Energy Isolate.

Philosophy of Education

T : (R)

Educational Psychology

T : (5)

Mathematics, Philosophy, Law and sometimes Sociology, usually form Energy (SD), as these are taken as methodologies involving some action or problem :

Mathematical Economics

X : (B)

Philosophy of History

V : (R)

Labour Laws

X : 9 : (Z)

Biophysics

G : (C)

Biophysics of the Eyes

G 185 : (C)

Mathematical Biophysics

G : (C) : (B)

As also said in the chapter on geographical isolates, the space isolate may also be sharpened by (SD)

1 (Q7)	Muslim countries
5 (Q7)	Muslim Europe
44 (P152)	Hindi Speaking States of India
4 (Y : 52)	Over populated countries of Asia

It may also be taken care that the isolate proposed to be got or sharpened by (SD) is not enumerated already. For example, at the outset one may be tempted to synthesise the class number U : (B) for Mathematical Geography. But having a glance on the schedule one finds it as U1, so the synthesized class number is wrong. Similarly, one may make the class number for the Psychology of Engineer as S(D), which is wrong and S4 (D) is correct. Similarly, for Religious Libraries, the number is 24(Q) not 2(Q). This much care must be exercised, as the schedule is the final authority.

3) Geographical Device (GD)

The Geographical Device (GD) is said to be applied when a Geographical Isolate wholly or partly officiates as a personality facet. It means (GD) may be used either to sharpen an existing Personality Isolate or create altogether a new isolate by geographical characteristics.

In V History, Z Law, In Canonical classes NA to NR of N Fine Arts, and z Generalia, personality is to be got by (GD):

V44	Indian History
Z44	Indian Law
z44	Indology

In all the above class numbers "44" has been borrowed from size Space Isolates and obviously they are posing as Personality Isolates. Again:

NR44	Indian Music
NQ56	English Paintings
NA5	European Architecture

Here all the personality isolates have been got by (GD). (GD) is also used to sharpen some of the Personality Isolates in Q Religion, R Philosophy and Y Sociology. For example:

Q 8	Other Religions [Divided by (GD) and by (FD)]
Q8441	Sikhism

44 stands for India and the last digit 1 has been got by favoured category Device.

In Philosophy R8, other systems of Philosophy are to be got by (GD). For example:

Greek Philosophy
R851
Chinese Philosophy
R841

Here 51 and 41 respectively have been taken from the Geographical Isolates.

Y74-79 Territorial Divisions to be got by (GD).

Indian Society
Y744

Here Y7 has been amplified by (GD), i.e. 44 taken from the schedule of Geographical Isolates.

Similarly, Sociology of American will be :

Y773

In P Linguistics, [P₂] is to be sharpened by (GD).

Chhatisgarhi Dialect of Hindi

P153, 9D447185

Pakistani Dialect of Punjabi

P153, 9D44Q7

Here [P₂] 9D has been sharpened by 4452 and 44Q7 respectively.

(GD) and (CD) may also be used in succession to form a Personality Isolate.

For example:

UNO History

V1N4

Here 1 got by (GD) has further been sharpened by (CD).

Similarly,

V1N48 History of British Commonwealth

In common Isolates k cyclopaedia, m periodical, n serial, p conference proceedings, v history and w biography [P₁] is to be got by (GD).

Encyclopaedia Britannica

k56, L

Collected Biographies of Indian Scientists (youngest born in 1935)

Aw44, N3

(5th) International Study Conference on Classification

(Canada, 1991)

2 : 51p1, N91

Here p has been sharpened by 1 taken from the schedule of Space Isolates.

Indian Journal of Sociology

Ym44, N

Here m has been sharpened first by (GD) viz, 44 standing for India and taken from the Geographical Isolates.

All such situations where (GD) is to be applied have been indicated in the schedules. There seems hardly any place where we have to apply (GD) of our own.

4) Alphabetical Device (AD)

It consists in either sharpening or forming a new isolate number on the basis of its nomenclature. For sharpening an isolate number it is used to individualize trade names, of commercial products and cultivars in agriculture. For example:

D5125A	Atlas Bicycle
D5125A V	Avon Bicycle
D5125H	Hero Bicycle
D5135R	Rajdoot Motor Cycle
J381B	Basmati Rice
J381P	Parmal Rice

while using the (AD), only the minimum number of Roman Alphabets should be used to individualize the isolate number.

In case of Personality Posteriorising Common Isolates, [P₁] is to be got by (AD) in case of local institutions.

Guru Nanak Dev University

T4.4443, d, G

(Here G stands for Guru Nanak Dev University)

Holy Heart Elementary Kindergarten School Amritsar

TL8, 15.4443, A, d, H

[P₄] of O Literature can also be got by (AD), it is an option, but it is easy and therefore widely accepted:

Shakespeare's Hamlet

O111, 2J64, H

Shakespeare's As You Like It

O111, 2J64, A

G.B. Shaw's Arms and the Man

O111, 2M56, A

Also in N Fine Arts, the (AD) may be used to individualize the works of different artists belonging to the same school. Further the works of an artist may also be individualized by (AD).

Collected Paintings of Picaso

NQ52, NxP

P stands for Picaso. N is by (CD)

Again Picaso's *Guernica*

NQ52, NxP, G

Alphabetical Device is applied as the last resort; as this sort of arrangement, as Ranganathan himself says, is least helpful though easy to handle and use.

5) Mnemonic Device (MD)

It means that when the same concept recurs in different parts of the schedule, it should be denoted by the same digits. For example:

Animal Physiology

K : 3

Plant Physiology

I : 3

Human Physiology

L : 3

But in the CC the mnemonic device has attained intuitive depths, and entities which are seminally the same or analogous, should also be represented by the same digits:

Human Diseases

L : 4

Social ills

Y : 4

Indeed, it is very difficult to perceive the seminally equivalent entities, therefore, it is very difficult to apply the mnemonic device. It is mostly used by the classificationist, and very rarely by the classifier. Nevertheless, it imparts a iniformity, symmetry and a formulable structure to the scheme. The list of seminally equivalent entities has been given in Rule 05841 page 1.32 of the Rules.

6) Classic Device (CLD)

Classics, we know, are works embodying startling innovations and create new paradigms in Alfred Kuhn's words. A Classic stands the test of time and always provokes commentaries and further commentaries upon it. To keep a text and the critical books on it together, Ranganathan devised what he calls the Classic Device (CID).

It consists in putting the digit x after the ultimate class to which a classic belongs. The digit x is further amplified by [P₁] and [P₂] may be got by (CD) as in O Literature. [P₁] is also got as the work facet as in [P₄] of O Literature. It may be got by Group Notation or by (AD). Commentary and further Commentaries are also treated as Personality facets, the formula takes the form:

[Class number] x [Author], [Work], [Commentary], [Subcommentary]

Some examples borrowed from Part-3 of the CC, will illustrate the above formula.

Caraka Sainhita

LBx1, 1

It means that it is the first work of the first author on Ayurveda.

Sasruta Samhita

LB : 4 : 7x2, 1

It is work on Ayurvedic Surgery (LB:4:7) by an author who is deemed to be the second classical author on the subject and it is his first work.

7) Favoured Category Device

This device maintains that entities having the same function may be distinguished by their popularity, use, or the literary warrant - actually all three means the same thing. Of such entities a list is drawn in the order of their popularity and the entity at the top is given the number 1, the second 2 and so on. This device has been employed in J Agriculture. For example all the seed foods have the class numbers J 38.

Further, kinds of food grains whether rice, wheat, etc. are distinguished on the basis of their popularity of use:

J 381

Rice

J 382

Wheat

J 383

Oats

J 384

Rye

Apart from this, as also stated earlier, the favoured category device is used to get the Isolate number for a classical author. It is also used in case of Personality Isolates in Q Religion, got by (PD). Actually it is more a classificationist's rationale than a classifier's device.

8) Superimposition Device (SID)

Especially in depth classification work, the focus of an isolate may be distributed over more than one isolate of the same facet. Therefore, in the CC, two different isolates from the same facet may join, yet not form a complex class. For example, in the main class Sociology, the isolate for "Urban Woman" has not been enumerated. But both "Urban" and "Woman" occur as different Isolates in the Personality of Y Sociology. There is no relation between the two—except that in this particular title they complement one another. So the Phase Relation cannot be applied here. In such cases the Isolate number is constructed by the mutual denudation of two or more isolates within the same facet by the Superimposition Device (SID).

Ranganathan defines (SID) as "connecting together two or more isolate ideas belonging to the same universe of Isolate Ideas."³ It consists in putting a hyphen "-" between the two or more isolates involved. For example, the "Urban Woman" will thus get the class numbers:

Y 15-33

It is a question that which of the two Isolates should come first. The simple rule is that, the isolate which occurs first should come first, but if such a sequence is unintelligible then the sequence may be reversed. For example:

Female University Students

T 4-55

Though in the CC there are no examples showing more than two isolates connected together by (SID), but in the rules or otherwise there is nothing to prevent us to construct isolate number by (SID) involving three or more Isolates.

Genius Female University Student

T 4-55-61

Urban working class youth

Y 12-33-49

National Library of Medicine (USA)

213-4 (L), 73

National Science Library of India

213-4 (A).44

Another significant use of (SID) occurs in constructing isolate number for Space Isolates numbers for empires

British Empire

1-56

French Colonies in the World

1-53

Similarly

Italian Possessions in Africa

6-52

British India

44-56

(Please note that here 56-44 will be an absurd isolate number)

Though (SID) is a great hospitality device, but its too much use shows some snags in the enumeration pattern. If in a main class too many isolates are got by (SID), it shows lack of foresight on the part of the classificationist. Ranganathan informs that this device will be used too frequently in the seventh edition of the scheme, as that will be a really depth classification schedule.

Important : In the *Prolegomena*(Sec. RP,) Ranganathan states "Superimposition of isolate ideas is most commonly experienced in a Personality Facet". Therefore, its use in other rounds and levels of Personality should be avoided. Moreover, in other categories such as Matter, Energy, and Time, the (SID) should not be used. Anyhow, the following class number is admissible.

Eye Tissues of Children

L 9 C, 12-155

But the following class number is NOT ADMISSIBLE

Poetic Drama of T.S. Eliot

0111, 1-2 M 88

And Say 'Distribution Management in Coal Industry' :

X 8 (F 551) : 3-8

is also wrong, as (SID) is not possible in the Energy category.

**LIBRARY SCIENCE, MATHEMATICS, PHYSICS,
CHEMISTRY AND ENGINEERING**

Objectives :

This chapter gives the procedures and practical exposure in the five basic classes of Library Science, Mathematics, Physics, Chemistry and Engineering. After reading this chapter, you will be able to:

- * *Learn to construct complex and compound class numbers in the respective classes*
- * *Learn the methodology for classifying the documents and their facet formulas*
- * *Make class numbers of the titles as given under the class*

2 LIBRARY SCIENCE
Facet Formula : 2 [P]; [M]: [E] [2P]

[P] is the kind of library. Its isolates are enumerated and the (IN) 4 can be further sharpened by (SD).

[M] is the kind of document under process. Its isolates are the same as that of [P] of a Generalia Bibliography.

[E] cum [2P] are library techniques, procedures and processes.

In case of 2 : 51 or its extensions, [2P] is the subject classified to be got by (SD) preceded by the digit 9.¹ Though usually between [E] and [2P] no comma is put, but here it is necessary as the number of digits in [E] 51 vary as this can be amplified by (CD).

In case of specific, classification schedules 2 : 51 may be individualized by (CD), subject to the rules for applying (CD):

Public Libraries in Punjab
22.4443
Classification of Science Books
2 : 51, 9 (A)
Comparative Study of DC and CC
2: 51 M0vN3
(Intra-Array Comparison Relation)

¹ See the correction for these examples at page 1.64 in the Annexure page 23.

Difference in the treatment of Mathematics in UDC and LC classification schemes:

2 : 51M960wN, 9(B)

(Intra-Array Difference Relation)

Classification of Microfilms in Economics in the University Libraries of UK in 1980's

234 : 1512 : 51, 9(X). 56 'N8

Colon Classification of Microfilms in Economics in the University Libraries of UK in 1980's

234 : 1512 : 51N3, 9(X).56 'N8

National Library of Medicine (USA)

213-4 (L).73

Selection of Microfilms in the National Science Library of India

213-4(A) : 512 : 1.44

It has not been mentioned explicitly that [2P] in case of other Energy Isolates may also be got by [SD], as we get in the case of [E]51. But there is nothing to prevent the extension of above rules to any of the other Energy Isolates, 1, 5, 55, 6, 7, 81 and 97. Similarly, the cataloguing codes, too, may be individualized by (CD) as in the case of 2 : 51.

Charles C Jewett's Cataloguing code (1852)

2: 55M5

Cutter's Rule for a Printed Dictionary Catalogue (1876)

2: 55M7

Ranganathan's Classified Catalogue Code (1934)

2: 55N3

Cataloguing of Literary Manuscripts in Research Libraries

236: 12: 55, 9(O)

Selection of Science books in University Libraries²

234: 1(A)

Current Awareness Service in Government Department Libraries

248: 97

Difference of giving reference service in District Public Libraries and College Libraries

2210n33: 7

Documentation in Chemistry in Science Libraries

24(A): 97(E)

Encyclopaedia of Library and Information Science (Marcel-Dekker)

2k73, N7

International study conference on classification

Elsinore (1965)

2 : 51pl, N65

A Librarian looks back, Autobiography of Dr. S.R. Ranganathan

2wM92, 1

2. In these case between [E] and [2P] no comma is necessary according to Rule 0566, Page 1.28

- Collected works of B.I. Palmer (1910-1979)
2xN10
- Report of Advisory Committee for Libraries (Chairman, K.P. Sinha)
2.44'N57t
- Documentation Research and Training Centre (Bangalore : 1962)
2.44, f, 9N62
- Indian Association of Special Libraries and Information Centres, 1955
24.44, g, 9N
- Powers of the President of Indian Association of Academic Librarians
23.44, g, 9N, 1: 3
- C'wealth Library Association
2.1N48, g, 9N72
- History of Library Legislation in India brought upto 1970's
2: (Z)v44 'N7
- Philosophy of Librarianship
2: (R)
- Application of Computers in Book Selection
2: 81: (D6, 8(B))
- Herald of Library Science
2m44, N62
- Library Association Record
2m56, M
- Library Journal
2m73, M
- Inter-lending Review (BL 1972) (A Journal about Inter-Library Cooperation)
2: 4m56, N
- (Supposing that it is the first British Journal on the subject).
Library and Information Science Abstracts, (London, 1961+)
2am56, N6
- International Federation of Library Associations and Institutions (IFLA, 1927)
2.1, d, g, 9N2
- International Society for Knowledge Organization (ISKO, 1989, Frankfurt)
2: 51.1, g, 9N8
- Library Association of SAARC (LASAARC, 1992)
2.4N8, g, 9N

B MATHEMATICS
Facet Formula: B [P]; [M]: [E] [2P]

In CC, the schedule is quite exhaustive and in-depth. Yet it is quite simple to apply. Statistics, mechanics, Physico-mathematics and Astronomy have been enumerated as parts of mathematics. Personality occurs in three levels in 833, Differential and Integral equations. Extensive use of (CD) has been made in case of theorems.

At the first instance, mathematics has been divided canonically. Personality and Energy vary from canonical class to canonical class. There is no [M] nor [2E]. [P] is usually the kind, degree or order of the equation and [E] is the solution.

Sixth order ordinary Linear Equations

B331, 1, 6

Differential Plane Geometry

B62: 3

Non-Euclidean Descriptive Line Geometry

B6M, 1: 5

Three Dimensional Elliptic Geometry

B6M3, 3

Dynamics of Viscous Liquids

5756 : 3

Lunar Eclipse

B92 : 57

Moon tides in the Indian Ocean

B92 : 78.95

Calculating the Mass of the Earth

B91 : 622: b1

(b1 a posteriorising Energy Common Isolate)

Indian Standard Time

B9 : 165.44

Age of the Earth

B91 : 67

Astro-Chemistry

B9 : (E)

Life of John Kepler - the Great Astronomer (1571-1630)

B9wJ71

Collected Astronomical Works of Galileo

B9xJ64

Graphical solutions to Abelian equations

B239M:6

Influence of Tensor Calculus on the Theory of Relativity
 CN0g B463
 Difference between cardinal and ordinal numbers
 B3111ow3
 All Indian Seminar on Probability Theory (Calcutta, 1975)
 B281p44, N75
 Journal of the Indian Mathematical Society (1937+)
 Bm44, N3
 Nizamiah Observatory (Hyderabad)
 B9.44, f2, N
 Mensuration
 B6: (B1)
 Indian Institute of Astrophysics (Bangalore, 1972)
 B9: 6.44, d, 9N
 International Mathematical Union (Paris, 1952)
 B.1, g, 9N5

C PHYSICS

Like mathematics, physics too, has, at the first instance, been divided into canonical classes. Systems and specials of physics have been given at the end of the physics schedule, as usual. Matter is usually not present, but as per 4th example at page 1.71 it may be got by the Mnemonic Device. Similarly, it may also be got by (SD) if necessary:

Pressure of Gases

C28: 7

Michelson Morley Experiment on the Velocity of Light (1887)

C51: 2M87

(Since it was a classic experiment on the velocity of light, so has been treated like a system)

Fizeau Method for determining the Velocity of Light (1849)

C51: 21M49

Propagation of Sound through metals

C3: 2; (E191)

It seems that the isolate number under C1 Fundamentals have been misprinted. The correct orders seems to be :

C11	Matter
C12	Weight
C13	Gravitation

C14 Energy

C15 Space

C16 Time

Melting point of organic substances

C4; (E5) : 512

Fluid meow of Heat (Put forth in the 18th century)

C4: 8L

Joule's Theory of Heat (1850)

C4: 8M5

Nuclear Fission

C9B3: 11

Neutron Spectroscopy

C9B31: 3

Nature of Light according to Relativity Theory

CN, 51: 8

Space and Time according to Gravitation Theory

CK, 51: 8

Low Temperature Wave Mechanics

CN2, 9D1

Elasticity of Glass at High Temperatures

C9D8, 215: 2

Diffusion of Gases at Low temperature according to Wave Mechanics

CN2, 9D1, 28: 93

A Comparative Study of the Corpuscular and Quantum Theories of Light

C51: 8KowN

Life of J.J. Thomson (1856-1940)

CwM56

Physics Papers of Sir Isaac Newton (1642-1727)

CxK42

Practical Physics

C: f3

Saha Institute of Nuclear Physics (Calcutta, 1951)

C9B3.44, d, S

International Commission on Illumination (1900)

C5: 28. 1'N00t5

Mass Energy Relation

C830t4

Mathematical Equation of Mass and Energy

C830t4: (B)

Mathematical Physics

C: (B)

Indian Journal of Pure and Applied Physics (1963+)

Cm44, N6

E CHEMISTRY**Facet Formula: E [P]:[E]cum [2P]**

A prominent branch of physical sciences, the Chemistry has for its object of study the structure and composition of substances in Nature, Commensurate with the breadth and depth of the subject. Ranganathan tried to be quite thorough in enumerating isolates for E Chemistry. But this most dynamic of the physical sciences foils all man-made attempts to contain it by such extrinsic methods. In the CC, though not stated explicitly, the main class E Chemistry has been divided into canonical branches: Inorganic Chemistry and Organic Chemistry. Physical Chemistry and Analytical Chemistry occur appropriately in Energy Isolates - yes, they are all action. Elaborate rules have also been provided for constructing class numbers for inorganic compounds such as hydroxides, oxides, acids, bases and salts. Rules for constructing isolate numbers for organic substances and their derivatives are comparatively simple. But as said earlier, these rules are quite inadequate to individualise nearly infinite chemical compounds, both organic and inorganic. Rules only result in almost primitive grouping of chemicals, Many new branches find no mention in the schedules or have not been accorded a due status as per theft literary warrant. These broad grouping has resulted in many homonymous isolate numbers: many different chemical compounds get the same isolate number. Many kinds of compounds and the recently discovered elements (with atomic number more than 100) have not been included in elements - though their substance number can be constructed as per the rules given. A special index for chemical substance especially elements would have been quite useful. Some misprints and anomalies in rules and isolate have also been pointed out.³

- [P] : elements or compounds, organic and inorganic, collectively termed as substance number.
- [P₂] : organic derivatives, so applies differentially to E 5, E 6, E 7 and E 8.
- [E] cum [2P] : Chemical processes and manipulations.

Inorganic Substances

E 1 to E 4 are all branches of Inorganic Chemistry, so it is a telescoped array. E 1 deals with the Chemistry of chemical elements: and E2 to E4 deal with various Inorganic compounds. But there is no isolate number for all the inorganic substances taken together. In case of E1 elaborate rules exist for constructing isolate number of chemical elements. In CC the classification of elements is based on the Periodic Table. But the

problem is that the periodic table itself is not without anomalies. An Isolate Number for an element usually consists of three digits and in some cases of five digits also. In a substance number of an element the first digit 1 stands for the substance element, the second digit for the group to which it belongs in the periodic table, and the third digit is its period number in the periodic table. For example, the isolate number 182 for Iron may be analysed: first digit 1 stands for the element, the second digit stands for the eighth group in the periodic table, and the third digit 2 stands for the period of iron in the periodic table. If more than three digits occur in an isolate number of an element, the extra digits are only to accommodate the element in the already pre-occupied cell of the periodic table. Since (IN)s for almost all the known elements (with the exception of a few unstable elements) have been enumerated, so the rules from E1 to E1 19 (page 1.74) only explain the rationale behind assigning (IN)s to the Chemical elements. They may, however, be used to fix the isolate numbers for the chemical elements, which have not been enumerated in the CC or may be discovered in the future. On the basis of these rules the possible substance number for the following elements are given below:

Einsteinium	(Es)	13791
Fermium	(Fr)	13792
Mendelevium	(Md)	13793
Nobelium	(No)	13794
Lawrencium	(Lr)	13795
Rutherfordium	(Rf)	1479
Hahnium	(Ha)	1579

Before constructing class numbers for inorganic compounds, it is a prerequisite to understand the term "Element Number" and "Full Element Number":

Element Number is defined by Ranganathan as the group of digits following the digit 1 in E1 (Rule E111 page 1.74). In other words the element number usually consists of the group number followed by the period number in periodic table. It may be noted that only the elements can have any element number, not the compounds. For example, the element number for Hydrogen is 10, for Zinc it is 23 and for Helium it is 00, for Platinum it is 879 and for Actinium it is 391, and so on.

For full Element Number the valency number is added to the Element Number.

Full Element Number = Element Number + Valency Number for example, the Full Element Number for Hydrogen is $10+1=101$. Similarly, the full element number for Zinc is $23+2=232$, for Helium it is $00+0=000$ and for Actinium it is $391+3=3913$.

It may be noted that some of the elements exhibit more than one valency number depending upon the compound; Platinum has two valency number 3 or 4; Gold has valency 1 or 3. Similarly Chromium has three valency numbers 2, 3 or 6. And various valency numbers for Manganese (Mn) are 2, 3, 4, 6 and 7. Therefore, the full Element Number of these elements vary from compound to compound. The Full Element Numbers of the above elements are as follows, for example:

Platinum	(Pt)	8793 or 8794
Gold	(Au)	181 or 183
Chromium	(Cr)	622, 623, 626

Manganese

(Mn)

722, 723, 724, 726 and 727

Hydroxides

Substance number for a hydroxide is got by adding to the digit 2 the Element Number of the element whose hydroxide is under study, viz., the Basic element. For example, water which has been treated as hydrogen hydroxide [H(OH)] for this purpose will get the substance number:

$$2+10=210$$

Similarly the substance number for sodium hydroxide Na (OH) (Caustic Soda) is:

$$2+11=211$$

Substance number for some of the hydroxides are given below:

Potassium hydroxide	KOH	212
Calcium hydroxide	Ca(OH) ₂	222
Aluminium hydroxide	Al(OH) ₃	231
Iron hydroxide	Fe(OH) ₂	282

For *Oxides*, the Full Element Number of the element whose oxides is the primary focus should be added to the digit 2. The formula is:

2+Element Number+Valency **or** 2+Full Element Number. For example substance number for Ferrous Oxide:

$$\text{FeO is } 2+82+2=2822$$

Similarly, substance number for some of the oxides are given below:

Ferric oxide	Fe ₂ O ₃	2+82+3=2823
Sodium oxide	Na ₂ O	2+11+1=2111
Lead Monoxide	PbO	2+48+2= 2482
Carbon dioxide	CO ₂	2+40+4=2404
Manganese dioxide	MnO ₂	2+72+4=2724

For Acids the substance number is constructed by adding to the digit 3 the Full Element Number of the constituent element. Let us make the substance number for sulphuric acid H₂SO₄. Here sulphur is the element whose oxide forms the acid. Element number for sulphur is 61 and valency number is S in this case. Thus the Full Element Number for sulphur is 616. Hence the substance number for sulphuric acid is 3+616=3616. Similarly, the Substance Number for other acids are:

Nitric Acid	HNO ₃	3505
Hydrochloric Acid	HCl	3711
Hydrofluoric Acid	HF	3701
Hydrobromic Acid	HBr	3731

For Salts as per 9th example on page 1.76 the substance number is got by adding to 4 the Element Numbers for basic and acidic elements respectively. For example, the substance number for Sodium Chloride NaCl:

$$4+\text{Element Number of Sodium}+\text{Element Number of Chlorine}$$

Chlorine=4+1 1+71=41171

Substance number for Gold chloride AuCl:

4+18+71=41871

For Silver Bromide AgBr = 41573

For Zinc Sulphide ZnS = 4+23+61 = 42361

For Barium Chloride = 4+26+71 = 42671

Similarly the substance number for Potassium chloride KCl is = 41271

Similarly the substance numbers for some of the salts are given below:

Gold Chloride 41871

Sodium Bromide 41173

In case of Organic and Biochemical substances, the substance Number exists in two levels. [P₂] called the combination number enumerates the derivatives of organic and biochemical substances. This provides individualization only upto the family level, not upto the Individual member. For example, both the Methyl chloride CH₃Cl and Methyl Bromide CH₃Br have the same class Numbers E611, 1. This nevertheless provides great hospitality.

Class Numbers for some of the Organic or Biochemical substances and their derivatives are given below:

Aliphatic Sulfuric Acid (It is a sulphur Compound of an aliphatic substance)

E6, 6

(Laboratory) Preparation of Methyl chloride

E611, 1 : 11

Solubility of Ethyl Bromide

E612, 1: 2201

Aliphatic Silicons

E6, 841

(Here 8 of [P₂] has been amplified by the Element Number of the Silicon as per Rule E28, page 1.76).

Synthesis of Aromatic Esters

E7, 383 : 4

Benzoic Acid (Acid of Benzene)

E711, 3

Aniline (Amino Benzene)

E711.51

Dimethyl Ether

E611, 281

Dehydration of Methanethoil

E611, 6:82

Nitromethane

E611, 57

(The isolate number 7 in [P₂] (page 2.48) for Nitro compounds seems to be a misprint. The correct isolate number appears to be 57 instead of 7).

Commerical Quantitative Analysis of Acetic Acid

E612.3 : 34, 6

Difference between the preparation of Ethers and Ketones

ES, 2810w5 : 11

Biochemistry of Vitamins

E9G, 97

Quantitative analysis of Proteins by Raman Spectra in Biochemistry

E9G, 92Z2 : 33, E7

Organic Physical Chemistry

ES: 2

Some Examples from Inorganic Chemistry:

Periodic Table of Chemical Elements

E1 : 17

This can further be sharpened by (CD) in case of various periodic systems.

Mendeleyev's Periodic Table (1869)

E1 : 17M6

Thomsen's Periodic Table (1895)

E1 : 17M9

Difference between Atomic weights of oxygen and sulphur

E160 0w1 : 14

Oxidation of Sulphur

E161 : 81

pH value of Salts

E4 : 3, T6

Qualitative analysis of water by Electrical Method

E210 : 33, F

Valency of Radium

E129 : 215

Synthesis of Nitric Acid

E3505 : 4

Influence of Physical Chemistry on Inorganic Chemistry

E10gE : 2

Relation between organic and inorganic chemistry

E10j5

Indian Chemical Society (1924)

E.44, g, 9N

Indian Institute of Metals (Calcutta, 1946)

E191.44, d, 9N

- Society of Biology Chemists (India, 1930)
E9G.44, g, 9N
- International Union of Pure and Applied Chemistry (IUPAC) (Oxford, 1919)
E.1, g, 9N1
- Biography of Sir Humphry Davy (1778-1829)
EwL78
- Chemical Abstracts
Eam73, M
- Russian Journal of Physical Chemistry
E : 2m47, N
- Indian Journal of Chemistry (1963+)
Em44, N6
- Estimating the quantity of Sulphur in Sulphuric Acid
E36160k161 : 34 (See Rule E18, page 1.76 of CC-6 (1963))
- Determining the presence of Copper in an alloy by Electrical Method
E1930k13: 33, F
- Bibliography of Chemical Physics 1995
E: (C) aN9
- History of Indian Chemistry brought upto 1990s
Ev44 'N9

D ENGINEERING

Facet Formula: D [P], [P₂]: [E] [2P]

Engineering is a very vast discipline having many branches in its fold. Ranganathan implicitly takes Engineering only as a sort of applied physics - a very narrow definition. Modern branches of Engineering have either altogether been omitted or their enumeration is scanty. The main classes allied to D Engineering are F Technology, HZ Mining and M useful Arts - these are supplements to it.

The first division of Engineering is on canonical basis. Though each canonical class has its own personality Isolates, even then a common connective of all the Personality Isolates can be found out:

- [P] is the kind of work
- [P₂] is the part of work, so it varies according to [P] - meaning that [P₂] isolates are not common for all isolates of [P]₁.⁴ However, for D6 Mechanical Engineering [P₂] means the field of applications. Its isolates, if not enumerated, may be got by (SD).
- [P₃] is the part of work of D5. Its isolates have not been enumerated in this schedule. Perhaps, these would be enumerated in the depth version of the

schedule.

[E] cum [2P] are various engineering operations.

D66 Electrical Engineering has some Common Isolates specially meant for it. Its isolates have been enumerated at the end of the schedule viz., page 2.45.

Constructing Brick Roofs

D33, 6: 7

Surveying for underground Railway Platform

D4154, 87: 2

Specifications for the floor of Dining Cars in Rail Carriages

D515336, 63: 5

Train Car Roof Repair

D5151; 66 : 85

Aerial Survey for Airport site

D43, 8 : 28

Machine Tools

D6, 8

Drilling Tools

D6, 845

Repair of Harvesting Machinery

D6, 8(J: 7): 85

Dairy Machinery

D6, 8(KZ311: 71)

Mining Equipment

D6, 8(HZ)

As mentioned in the schedule and also from the hierarchical principle, we can infer that all the isolates of [P₂] for D6 are also equally valid for all its branches:

Mechanical Lifts

D6, 71

Electrical Lifts

D66, 71

Hydraulic Lifts

D635, 71

Mechanical Printers

D65, 8(M14)

Electronic Printers

D65, 8(M14)

Electronic Clocks

D65, 8(B): 4

Storage of Weak Current

D665, 18

Maintenance of Underground Electrical Transmission Lines

D66, 24: 82

Alternating Current (AC) Meter

D664e3

Energy meters for overhead transmission of Two Phase AC

D6642, 21e5

Purification of (Water Supply) water by Salts

D85534

The last digit 4 has been got from E Chemistry as per instructions under D8553.

Chlorination of Drinking Water

D8553171

Difference between the generation of AC and DC Currents

D6630w4: 1

Influence of Electrical Engineering on Civil Engineering

D1 or 66

Institution of Engineers Bulletin (1951+)

Dm44, N5

All India Annual Conference of Electrical Engineers (1975, New Delhi)

D66p44, N75

Bulletin of Electronic Society of India (1970)

D65m44, N7

Guru Nanak Engineering College, Ludhiana

D.4443, e4, G

Functions of the Institute of Engineers India (1920)

D.44, d, 9N: 3

Self-Check Exercise-1

1. Documentation services in research libraries of European countries.
2. Cataloguing of periodicals in the insurances libraries of Delhi during 1998.
3. Journal of Library and Information Science (JLIS) brought out by the Department of Library and Information Science, University of Delhi, Delhi since 1976.
4. Functions of the President of Delhi Library Association (DLA), Delhi.
5. Quartics Geometry: Its foundation.
6. American Journal of Mathematical Sciences published by AMS since 1946.
7. Indian Mathematical Society report (Founded in 1967)
8. History of bibliography of mathematics.
9. Functions of the Director National Physical Laboratory for the period of 2003

- (founded in 1952).
10. Reflection of gamma rays.
 11. Band spectra according to wave mechanics.
 12. Scattering of cosmic rays.
 13. Introduction to physical chemistry.
 14. Biochemical analysis of alkaloids.
 15. National seminar on 'Thermo-chemistry' organized by the Department of Chemistry, University of Delhi, Delhi from 28th Feb. - 3rd March 2003 in the Ashoka Hotel, New Delhi.
 16. Research in bio-chemistry.
 17. Specification for the manufacturing of Refrigerators in Cambridge: A city of England.
 18. Construction of overhead transmission wires.
 19. Biology of water supply.
 20. Influence of television on the urban youths of developing countries.

References/Readings

1. **RANGANATHAN (S.R.)**. Colon Classification. Ed. 6. Bangalore: Sarda Ranganathan Endowment for Library Science, 1960.
2. **KAULA (P.N.)**. A treatise on colon classification. New Delhi: Sterling Publishers, 1985.
3. **RANGANATHAN (S.R.)**. Elements of library classification. Ed.3. Bangalore: Sarda Ranganathan Endowment for Library Science, 1989.
4. **SATIJA (M.P.)**. Manual for practical colon classification. Rev Ed.3. New Delhi: Sterling Publishers, 1995.
5. **SEWA SINGH** : Colon classification.: New Practical Manual. Delhi: B R Pub.2006.
6. **SATIJA (MP)** : Colon Classification : A Practical Guide: New Delhi : Satija Research Foundation in Library & Information Science 2013.

TECHNOLOGY, BIOLOGY, GEOLOGY, MINING

Objectives :

This chapter gives the procedures and practical exposure in the four basic classes of natural sciences namely technology, biology, geology and mining. After reading this chapter, you will be able to:

- * *Learn to construct complex and compound class numbers in the respective classes*
- * *Learn the methodology for classifying the documents and their facet formulas*
- * *Make class numbers of the titles as given under the class*

<p>F TECHNOLOGY Facet Formula : F [P]: [E] [2P]</p>

In the CC, the term "Technology" has been used very confusingly. Ranganathan has restricted the scope of the (MC) F Technology only to Chemical Technology or Industrial Chemistry, meaning the mass or industrial production of Chemicals and their byproducts. Enumeration of isolates, especially in the problem facet is too scanty.

[P] : It is the substance facet. Its isolates are the same as the [P] of E Chemistry in addition to some enumerated isolates.

[E] cum [2P] means the problem facet as well as the process facet. Isolates for the problem facet have to be taken from E Chemistry. The digits following 8 in E 8 are to be taken as the problem (Rule F22 page 1.77).

Fermentation of Alcohol

F54 : 7

Industrial Chemistry

F

Industrial Oxidation

F : 1

There may be various industrial processes for a single problem. For example (Hypothetical) ABC process of water distillation, XYZ process of water distillation. Here distillation is the problem and ABC and XYZ are two different processes. In such cases process facet will come earlier followed by the problem facet. *The process and the problem facets are to be separated by a Colon.* The isolates in the process facet are to be got by (AD). And the isolates in the problem facet are the digits following 8 in the energy isolate of E Chemistry. (Rule F23, page 1.78).

ABC Process of Water Distillation

F210 : A : 35

XYZ Process of Water Distillation

F210: X: 35

Lead-Chamber process of Sulphuric Acid

F3616: L

According to Rule F2, page 1.77, the process isolate has been got by (AD).

Contact Process of Sulphuric Acid

F3616: C

Industrial dehydration of Methyl Ether

F611, 281:2

Haber process for Ammonia

F1129: H

Industrial Distillation of Nitro Paraffins

F61, 5: 35

If there exist more than one industrial form of a substance, then the isolate number for each form should be got by the Favoured Category Device. Coal is usually graded as follows, so we can assign isolate number accordingly:

High-volatile	A bituminous	551
Medium-volatile	bituminous	5511
Low-volatile	bituminous	5512
Simianthracite		5513
Anthracite		5514

Similar example for iron has been given at page 1.77.

Difference between Paints and Tanning Material

F58950w7

Difference between the Industrial Colouring of Paints and Tanning Material

F58950w7: 95

Kirk-Othmer Encyclopaedia of Chemical Technology (1947)

Fk73, N4

Statistics of Soap making units in Punjab in 1960

F9496A443 'N60s

(Deeming it a stray report)

Report of Shri Ram Chemicals Limited India

F.44, h, Sr

Central Food Technological Research Institute, Mysore (Bangalore, 1950)

F53.44, f, 9N5

Management Board of the Dalima Biscuit Factory (Rajpura, Punjab)

F53.4443, k, D, 2

Collected works of Louis Pasteur on Alcohol Fermentation

F54 : 7xM22

Indian Arms and Explosive acts

F5594 : (Z44)

Dehydration of Coffee beans

F53 (J481) : 2

Journal of the Colour Society (India, 1962+)

F58m44, N6

Fuel Abstracts and Current Titles (Britain, 1960+)

F55am56, N6

Atlas of Drug Industries in India, 1970

F56fN7.44

G BIOLOGY

Facet Formula: G [P]: [E] [2P]

It is a generic class for life sciences say L Medicine.

[P] is the kind of life.

[E] cum [2P] is the biological problem of life.

The schedule is too simple but the following two special reminders may be borne in mind.

(1) [2M] may be required in case of Energy isolates 33, 341, 345 and 346.

Here the [2M] is the same as the [P] of E Chemistry; if further required the isolates in [2M] may be got by (SD):

Chemical effect of nitrogen on tissues

G12: 33E; 150

Chemical effect of drugs on tissues

G12: 33E; (F56)

(2) The second point of care is that in case of Energy Isolates from 12 to 18 and 5 space isolate should be added immediately - without it the subject may appear meaningless or incomplete. The subjects of Fauna, Flora and Ecology are best studied in context of some geographical area. These two peculiar points are also valid in I Botany, K Zoology, KZ Animal Husbandry, and L Medicine.

Fauna and Flora of India

G: 12.44

Ecology of Indian Ocean

G: 5.95

Nucleus Microphotography

G113: 1995

British Journal of Indian Fauna and Flora (started in 1962: a hypothetical case)

G: 12.44m56, N6

(Indian) Journal of Indian Fauna and Flora started in 19th century

G: 12.44mM

In this peculiar example [P₁] to the ACI m has not been added, as the space has already been represented in the subject proper. In such cases (as per the first example on page 1.79) where [P₁] of any (ACI) is absent then [P₂] may be added directly without a comma. From this example it is inferred that [P₁] and [P₂] of (ACI) are telescoped as in the case of V : 19 [P₁], [P₂]. In these cases if [P₁] is absent [P₂] is added without the use of a comma.

Marine Ecology of Pacific Ocean

G9555: 5.97

International Seminar on Indian Natural Environments (New Delhi, 1978)

G: 55.44p1, N78

Virus diseases of Plants and Animals

G: 423

Bengal Natural History Society (Darjeeling, 1923)

G: 12.4475, g, 9N23

Indian Biophysical Society Report (Founded in 1965)

G: (C).44, g, 9N65r

Opium Katabolism

G: 332: (J471)

Tobacco Anabolism in Embryo

G9B: 331: (J452)

Physical effects of Fasting

G: 346C

Physical effects of Fasting on the Embryo Cells

G9B, 11: 346C

Tissue Structure

G12: 2

Forest conservation

G95124: 527

Theory of Evolution of Life

G: 66

Since there exists many theories of evolution, so these may be treated as systems. Hence G:66 may be sharpened by (CD), wherever necessary:

Biblical Account of Evolution

G : 66B

Empedocles ideas of Evolution (450BC)

G : 66C

Darwin's theory of Evolution

G : 66M

(or simply G : 66 keeping in view the literary warrant on it)

Genetic effect of X-ray

G : 60gC53

Morphological Differences between cells and tissues

G110w2 : 2

Relation between Anatomy and Physiology

G : 20j3

Life of Charles Darwin (Born in 1809)

GwM09

Biological Abstracts (US, 1927+)

Gam73, N

Tropical Ecology

G9H : 5

On the analogy of L9H Tropical Medicine, we can make G9H as specials in Biology, meaning, Tropical Biology.

International Society for Tropical Ecology (Varanasi, 1960)

G9H: 5.1, g, 9N6

Tropical Animal Sociology

G9H: 56

Journal of Marine Biology Association of India 1959

G9555m44, N5

Advances in Microbiology Research in India

Brought upto 1995

G91: fv44 'N9

Indian Institute of Chemical Biology (Calcutta, 1935)

G: (E). 44. g, 9N3

H GEOLOGY

Facet Formula : H [P]: [E] [2P]

In the CC, Geology has been divided into eight canonical classes. The schedule is simple and apparently there seems no difficulty. But H6 Paleontology has some peculiar rules.

[P], and [E] cum [2P] vary according to the canonical class. Generally [P] is the substance or kind of earth surface; and [E] cum [2P] is the Geological process and problem.

In case of H1 Mineralogy [P] is the same as [P] of E Chemistry. In this canonical class, all the precious stones have been collected under the personality (IN) 9. Thus the class number for precious stones is H19. Isolates in energy have been enumerated.

Classification of Zinc minerals
H1123: 11

Occurrence of Sulphur in India
H1161: 155.44

Artificial Production of Pearls in Japan
H198: 164.42

Genesis of Volcanic Rocks
H211: 16

Occurrence of Sedimentary Rocks in China
H23: 155.41

Description of Indian Metamorphic Rocks
H22: 13.44

Geysers in Himachal
H412.4445

Quaternary stratigraphy of the Himalayas
H55.4.g7H

As said earlier one has to be careful in H6 Palentology. Firstly, here in H6, books only on Paleozoology are to be classed. Therefore, [P] of HG is the same as [P] of K Zoology. Books on Paleobotany go to I Botany. As is quite evident in paleontology time facet is always necessary. But the isolate numbers for Time are not to be taken from the general schedule of Time isolates. But it is to be taken from the H5 stratigraphy by replacing H5 by A. It means:

H5 = A
H51 = A1 and so on.

It is necessary because the geological time is not measured in centuries or millennium. These are too small units for evolutionary processes. Time here takes astronomical magnitude. A century or even a millennium is just a pulse beat time for such evolutionary changes:

Mesozoic Age A3
Recent Times A55
Paleozoic Hydrozoa

(Here Paleozoic is the Time, to be taken from H5 and Hydrozoa is a zoological species, to be taken from the personality of K Zoology).

H641 'A2
Cainozoic Insects
HG86 'A4
Permian Carnivora
H69791 'A26
Fossils of Recent Primates
HG 9797 'ASS
Canozoic Ayes
H696 'A4

Silurian Protozoa

HG2 'A23

Underground deposits of economic value are collected under H7 Economic Geology. [P] and [E] of H7 are the same as that of H1 Mineralogy.

Salt Deposits of Pakistan

H74.44Q7

Here H7 has been amplified by the digit 4, taken from the personality of E Chemistry, where it means salts:

Hidden Wealth of the Earth in India

H7.44

Underground water in Ganges Delta

H7210.44, e5G

Genesis of Iron Deposits in Bihar

H7182: 16.4473

Popular Description of Gold Mines in South Africa

H7182: 13.63

Diamond Deposits in Muslim countries

H791.1 (Q7)

Difference in the Genesis of Ruby and Sapphire

H19210w2: 16

Stratigraphy for Geographers

H5 0bU

Geophysics

H: (C)

Nuclear Geophysics

H: (C9B3)

Mathematical Geophysics

H: (C): (B)

British Journal of Mathematical Geophysics

H: (C): (B) m56, N

Annals of Geology (India, 1966+)

Hm44, N6

Geological Survey of India (1851)

H.44, f2, 9M

Central Seismological Observatory

H4132.44, f2, 9N

Journal of Petrology (UK, 1960+)

H2m56, N6

Biblical Account of the Origin of the Earth

H8B

Lord Kelvin's Theory about the Age of Earth (1899)

H8M9

HZ MINING**Facet Formula: HZ [P]: [E] [2P]**

It is applied mineralogy - the large-scale economic process of digging ores from the mines and the subsequent process of separating the required mineral from its impurities.

[P] is the ore. This forms the substance facet and is to be taken from the [P] of E Chemistry. Usually an ore contains many substances; the [P] should be the substance which can be extracted economically from it.

[P₂] is the part of the work.

[E] cum [2P] form the processes involved in mining.

Lighting the underground roads of Iron Mines

HZ182, 4:55

Surface transport in Sulphur Mines

HZ161, 8

Copper Pits

HZ113, 1

Timbering the Tunnels of Lead Mines

HZ148, 3 : 18

Transactions of the Society of Mining Engineers

(USA 1962+)

HZm73, N6

Society of Mining Engineers (USA)

HZ.73, g, 9N

Report of the Indian School of Mining (1926, Dhanbad)

HZ.44, e4, 9N2r

Director of the Central Mining Research Institute, Dhanbad (Founded 1956)

HZ.44, f. 9N56, 1

Safety in Mines Abstracts (UK 1952+)

HZ: 4am56, N5

It is one of the drawbacks of the schedule that Metallurgy has been separated from mining. Again no clear-cut isolates appear for mining of Coal and Petroleum and other fuel gases.

Self-Check Exercise-2

1. Industrial electro chemistry
2. English-Hindi dictionary of Fuel Gas Technology.
3. American Journal of Electro-metallurgy published from American Metallurgy

- Society since 1962.
4. Administration of the Central Food Technological Laboratory Institute, Mysore (Bangalore, 1950).
 5. Classification of Coastal Biology of India.
 6. International conference on 'Transmission of hereditary material' held at Indian National Science Academy (INSA), New Delhi from 20th to 23rd Nov. 2004.
 7. A study of the Fauna and Flora of Great Britain.
 8. Life and works of Charles Darwin (Born in 1809).
 9. A critical study of the Earthquakes of Japan.
 10. Geology for Engineers.
 11. Description of African Sedimentary Rocks.
 12. Genesis of Iron Deposits in Jharkhand.
 13. Indian Mining Code.
 14. Elementary Principles of manganese mining of India.
 15. Aims and objectives of the Central Mining Research Institute, Dhanbad (Founded in 1956).
 16. A study of the election procedure of President of Society of Mining Engineers, USA (Founded in 1952).

Further Readings

1. **RANGANATHAN (S.R.)**. Colon Classification. Ed. 6. Bangalore: Sarda Ranganathan Endowment for Library Science, 1960.
2. **KAULA (P.N.)**. A treatise on colon classification. New Delhi: Sterling Publishers, 1985.
3. **SATIJA (M.P.)**. Manual for practical colon classification. Rev Ed.3. New Delhi: Sterling Publishers, 1995.
4. **SEWA SINGH** : Colon classification.: New Practical Manual. Delhi: B R Pub.2006.
5. **SATIJA (MP)** : Colon Classification : A Practical Guide: New Delhi : Satija Research Foundation in Library & Information Science 2013.

**MEDICINE, AGRICULTURE,
ANIMAL HUSBANDRY AND SOCIOLOGY**

Objectives :

This chapter gives the procedures and practical exposure in the four basic classes of medicine, agriculture, animal husbandry and sociology. It is note to here that these four classes in the colon classification have a special treatment of **second round and second level of energy facet**. Therefore, the sociology in spite having the different nature of the study has been placed here. After reading this chapter you will be able to:

- * *Learn to construct complex and compound class numbers in the respective classes.*
- * *Learn the methodology for classifying the documents and their facet formulas*
- * *Make class numbers of the titles as given under the class*
- * *Make your answer checks from the solved answers.*

L MEDICINE

Facet Formula : L [P]: [E] [2P]: [2E]

It may be defined as a study of the human body to prevent and cure human diseases. It is one of the most successful schedules in the CC, yet it is marked for its generality and simplicity.

Systems and specials occur at the end of the schedule and the (SID) may be frequently required for constructing Personality Isolates.

[P] is the body organ.

[E] cum [2P] : Biological problems of human life; structure, working and failure of the human machine.

[2E] cum [3P] : Prevention or treatment or pathology of diseases.

[2M] may be required in case of human physiology: and [3M] in case of substances used as treatment - isolates of both these are to be taken from the [P] of E Chemistry.

Body organs enumerated as sub-divisions of 1 are regional divisions (morphological): and isolate numbers 2 to 8 denote functional divisions (anatomical). In case the focus of a term is diffused over both the regional and functional organs, then its isolate number should be got by adding the functional organ number to the regional organ number by (SID) (Rule L 113 page 1.88):

Veins of Leg

L134-36

Head Hair

L18-881

Wrist bone

L166-82

Eye Muscles

L185-83

Facial Skin

L181-87

Human Metabolism

L: 33

Sulphur anabolism on human skin

L87: 331; 161

Effects of Fasting during Pregnancy

L9F: 31: 94

Functional disorder in eye tissues

L12-185: 45

Curing structural disorders in skin cells by magnetic therapy

L11-87: 47: 627

Human Pathology

L: 4: 4

4 [E] Disease is implied when we talk of pathology, which occurs in [2E].

(Human) Electrotherapy

L: 4: 626

Injecting calcium in the Foetus with bone diseases

L9B, 82: 4: 616; 122

(Here calcium forms [3M] and has been taken from the [P] of E Chemistry)

X-ray diagnosis of bone fracture

L82: 477 : 3253

Preventing nutrition deficiency in children by diet regulations

L9C: 461 : 642

Blood Analysis by Raman Spectra

L35: (E : 3, E7)

National Malaria Eradication Programme (NMEP, India)

L: 54261.44

It is a topic of public health. L: 54 is mass prevention of diseases. As per instructions L: 54 has been divided as L : 4. *But it is not clear whether in the class number L: 54261.44f [P] is necessary as the class number for Malaria, as illustrated, is L35: 4261.*

State control on edible oil

L: 523943

(The last three digits come from F Technology, as instructed under L: 523)

State control on pet-dogs

L: 522 541

English Law of public health

L: 5: (Z56)

It may be remembered that whenever a main class digit is amplified by a system or special facet or both, a comma should precede the personality facet. Also a comma should separate the system and special facets, if these happen to occur simultaneously in a subject.

Treating eye diseases in children

L9C, 185 : 4 : 6

Homeopathic treatment of the eye diseases of children

LL, 9C, 185: 4 : 6

Osteopathy system

LM7

Public hygiene during war times by Ayurvedic Methods

LB, 9V: 55

Important : *There are no examples of the (SID) being applied to facets other than first level personality. Therefore, the admissibility of the following two class numbers is doubted:*

Tropical Female Lungs Surgery

L9F-9H, 45 : 4 : 7

Homeopathic treatment of eye diseases of old persons during War.

LL, 9E-9V, 185 : 4 : 6

Bibliography of Dental Surgery (1967)

L214 : 4 : 7aN7

Bibliography of Female diseases (1995)

L9F : 4aN9

In case of a bibliography [T] should cover the (LED) only.

British Encyclopaedia of public health (1967)

L : 5k56, N6

All Indian Conference on Pediatrics (1977)

L9C, p44, N77

Directory of Dental Surgeons in India (Started in 1975)

L214 : 4 : 7n44, N7

Medica Excerpta

Lam73, N

American Journal of kidney diseases (1981+)

L51 : 4m73, N81

Indian Journal of Homeopathic Medicine (1947)

- LLm44, N4
 Indian Journal of Public Health (1956)
 L : 5mm, N5
 Medicine Tropical (Spain, 1924+)
 L9Hm541, N2
 American Journal of Cardiology (1958+)
 L32m73, N5
 Indian Council of Medical Research
 L.44, f, 9N
 Report of the Cancer Research Institute (Bombay)
 L : 4725.44.B, f, Cr
 Maulana Azad Medical College, Delhi
 L.4481, e4. M
 Duties of the Principal of the Christian Medical College (Ludhiana)
 L4443, e4, C, 1 : 3
 Lives of British Great Doctors (Youngest born in 1836)
 Lw5G, M3
 [P₂] should cover the (LED); (See Rule 21w5 page 1.47)
 A comparative study of Radiotherapy and Thermo-therapy
 L : 42 : 50j6
 Anatomical Relation between nose and throat
 L1770j41 : 1
 Functional Relations between Ear and Throat
 L177 0t83 : 3
 Folk Medicine
 Y: 3(L)

J AGRICULTURE

Facet Formula: J [P]: [E] [2P]: [2E]

As in mathematics, Ranganathan seems at his best in the schedule of J Agriculture. Enumeration of isolates though not much crowded is quite efficacious. It has been achieved by a simple method of group notation - which is nothing short of further splitting an isolate. According to this device Personality, the Agricultural Produce, consists of three digits at least, as follows :

- (1) The first digit in the personality isolate is taken from the *utility* Array of plant. It means the use to which the produce is put to i.e., whether it is used as a food, intoxicant, or decoration, and so on.
- (2) The second digit is drawn from the *Part Array*. Part array enlists the various (morphological) parts of plants. This digit denotes the part of the plant

utilized, viz., whether, fruit, flower, stem, leaf, root, or the whole plant is used for any of the purposes noted in the utility array.

- (3) The third digit in the Personality Isolate is got by the *Favoured Category Device*. The most favoured substance is individualized by adding 1 to the isolate got by combining utility and part array digits. Similarly digit 2 is added, if it is the second favoured substance.

Let us illustrate the foregoing abstractions by the example of Rice, whose Isolate number in [P₁] is 381. Rice is a plant whose seed (Part Array) is utilized as human food (utility). It is the most favourite seed food all over the world. Therefore, the (IN) 381 may be analysed as follows:

3 = Food (utility)
8 = Seed (Part)
1 = Most favoured Seed Food

Similarly for wheat the (IN) is 382 for in use as human food, wheat comes next to Rice.

Let us take another example of Tobacco, whose (IN) is 452. Tobacco is a stimulant (utility) whose leaves (part) are used for this purpose next to tea.

4 = Stimulant (utility)
5 = Leaf (Part)
2 = Second favoured leaf stimulant

Since almost all the Isolates in the Personality of Agriculture have been enumerated, so the group notation device only explains the rationale behind the enumeration of Personality Isolates. However when necessary, new isolate numbers may be constructed on these lines. For example, let us make the isolate number for Papyrus. It was a fibrous plant whose stem was used for making writing sheets. Its isolate number may be 7492.

92 is the favoured category digit, as it is the least favoured fibrous stem today.

[E] means the agricultural problems. Energy occurs in two Rounds. [2E] cum [3P] stands for the secondary agricultural problems and processes.

[2P] is a part or extension of the [E].

Whenever an isolate form [2E] cum [3P] occurs, care should be taken that the isolate from [E] cum [2P] is supplied first, even if its not explicitly stated. For example, in "Agricultural Storage", storage cannot occur unless harvesting is done. Therefore, the formula is:

$$\text{(Agriculture)} : \text{[Harvesting]} : \text{[Storage]}$$

$$J : 7 : 8$$

It is merely a case of Wall-Picture Principle - there can be no mural without a wall; and no storage without harvesting.

Similarly,

Cold Storage of Potatoes
J341: 7 : 84

Another peculiarity of the schedule lies in the separate enumerations of [E] and

[2P] isolates unlike in most other schedules. Here [E] and [2P] isolates have been differentiated from one another. Each Isolate in [E] has its own different (or special) [2P]. But as usual there is no need of a comma being put between [E] and [2P] Isolates. Further each [2P] has its own set of [2E] isolates. It is another case of differential facets.

Soil Conservation

Soil is 1 in [E] and conservation is 7 in [2P] of 1[E]. So the class number is:

J : 17

Nitrogenous Manure for pulses

J388 : 241

(Pulse is 388 in [P]. Manure is 2 in [E]; and nitrogenous manure is 41 in the [2P] of 2 Manure in [E]).

Collection of Green Manure for Barley

J386 : 21 : 2

Infectious diseases of Apple

J371 : 42

(4 [E] disease has been amplified by [2P] as in L Medicine)

Treatment of virus diseases of Rice

J381 : 423 : 6

If [P₂] i.e., the organ of a plant is also present, its isolate number is the same as the [P₂] of I Botany.

Roots of Potato Plants

J341, 13

Structural diseases of Tissues in Fruit Plants

J37, 12 : 47

Varieties of an agricultural produce may be individualized by (AD):

J381B Basmati Rice

J381P Parmal Rice

Stem Diseases of Mexican wheat plants in Punjab

J382M, 14 : 4,443

Foci in [2P] of 3 and 7 in [E] are the same as in the Part Array of [P]. It is as per instructions given for [2P] isolate at page 2.66. The following examples will make it clear:

Storage of Onion Seeds

J321 : 78 : 8

Here 7 in [E] has been amplified by [2P]8. The digit 8 has been taken from the Part Array of [P] at page 2.64.

Similarly,

Propagation of Rose Stems

J561 : 34

Recovering Groundnut Seeds

J581 : 78 : 2

- Transplanting Rose Stems
J561 : 34 : 5
- Transplanting Rice Plants
J381 : 397 : 5
- Organic Manure for forests
JB : 25
- Dry Forestry for Fruits
JB, 9D, 37
- Agriculture of Papyrus in the Nile Valley in 500 BC
J7492.6.g1N 'C499
- C 'Wealth Agricultural Bureaux
J.1N48, f, 9N29
- International Institute of Tropical Agriculture (1968)
J9H.1, d, 9N68
- Report of the International Society for Soil Scientist (1924)
J : 1.1, g, 9N24r
- Director of the US Department of Agriculture
J.73, w, 9M, 1
- Journal of Soil Sciences (UK, 1949+)
J : 1m56, N4
- Khad Patrika* (1960+)
J : 2m44, N6
- Potato Abstracts (UK)
J341am56, N
- Punjab Agriculture University (Ludhiana)
J.4443, e4, P
- Though, it has not been stated explicitly, but [2M] may be added in J: 93 Physiology.
Isolates in [2M] are to be got from [P] of E Chemistry - as usual:
- Effect of Ammonia in the Physiology of Pulse Plants
J388: 93; 1129
- Iron Metabolism in Apple Plants
J371: 93; 182
- Central Potato Research Institute (Shimla, 1935)
J341.44, f, 9N3

KZ ANIMAL HUSBANDRY

Facet Formula : KZ [P]: [E] [2P]: [2E]

It is the science and technology of domesticating animals for some economic or esthetic uses.

[P] It is the kind of animal. As in J Agriculture Personality Isolates consist of at least three digits on the similar lines. Isolates in Utility and Part Arrays have been enumerated. Many [P] isolates have also been enumerated; others can be formed from the combination of Utility and Part array schedule.

[P₂] Though not mentioned explicitly, it means the body organ of the animals. It is the same as [P] of L Medicine.

[E] means the problems and techniques of animal husbandry. [2P] is the extension of [2E], Different [E] isolates have their different [2P] and different [2E] isolates. It is yet another case of differential facets, [2E] cum [3P] of KZ : 7 are the same as [2E] cum [3P] of J: 7, i.e., Agricultural Harvesting.

It may be reminded that [2M] may be required in case of KZ : 3. Its isolates are the same as the [P] of E Chemistry. The general facet formula is:

KZ [P], [P₂] : [E] [2P] : [2M] : [2E] [3P]

Fish Breeding

KZ332 : 6

Horse Feeding

KZ442 : 1

Corn Feeding to Horses

KZ442 : 1 (J385)

Here [2P] J385 has been got by (SD) as per instructions

Administering Corn Feed to Horses

KZ442: 1(J385) : 7

Storing of Starch Feed for Dogs

KZ541: 1(E6892) : 8

Treatment of Fever in Domestic Pigs

KZ334 : 414 : 6

Lungs diseases of traction animals

KZ4, 45 : 4

Administering salt injections to cure Infectious disease in poultry

KZ351 : 42 : 616 : 4

(Here 4 is [3M] taken from the Personality of [E] Chemistry.

See analogous example at the end of the page 1.27 of CC-6

Immunising dogs against bone cancer

KZ541, 82 : 4725 : 56

Water fasting by camels in deserts

KZ446 : 345.d

Physiology of Nitrogen in Pets

KZ5 : 3 : 150

Cow's Milk

KZ311 : 71

[2P] isolates of KZ : 7 are a peculiar case. They are not only special to 7[E] but also vary according to [P]. To illustrate further:

KZ31 : 7 and KZ35 : 7

have their separate [2P]

Cow's buttermilk

KZ311 : 75

Eggs of Hens

KZ351 : 75

Cold Storage of Buffalo Cheese

KZ312 : 78 : 84

Uses of Eggs

KZ351 : 75 : 97

Difference between the Eggs of Hens and Ducks

KZ3510w2:75

Diseases of Leg Muscles of Bulls

KZ441, 134-83 : 4

(It seems a doubtful case, as (SID) is seldom employed in other than [P₁] Isolates).

British Poultry Science (1960+) : A Journal

KZ35m56, N6

British Goat Society 1879

KZ313.56, g, 9M

Department of Animal Husbandry (Punjab Government)

KZ.4443, w, 9N

International Dairy Federation (Belgium, 1905)

KZ31.1, g, 9N

Directory of Veterinary Surgeons in Punjab started in 1971, (a hypothetical case)

KZ : 4 : 7n443, N7

Y SOCIOLOGY

Facet Formula : Y [P]: [E] [2P]: [2E]

Science of society which deals with the collective behaviour of socially organized groups. In the CC, Y Sociology also includes culture, civilization and anthropology. Here [2E] cum [3P] facet also occurs. [P] is the community or social group - isolates enumerated. [P] isolates can further be sharpened by (SID) and (SD).

[E] cum [2P] facet covers activities, traditions, social problems. Device of parallel schedules has been used frequently.

[2E] cum [3P] : Secondary problems. It includes conservation, development, and etiology and prevention and correction of social ills. It may be noted that 4[E] Isolates have their own different [2E] cum [3P] isolates.

It may be reminded that [2E] cum [3P] cannot exist without the prior existence of [E] cum [2P]. Therefore, whether stated explicitly or not [E] must be supplied whenever [2E] facet occurs.

A social study of urban women

Y15-33

Prevention of social evils among the slum youth

Y12-57:44:5

Educating the slum-youth against social evil.

Y12-57: 44: 5(T)

Flood relief work

Y: 4355: 67

Urban families of India - a social study

Y33 : 32.44

3[E] has been sub-divided as R4 Ethics

Coronation of a British Monarch

Y756: 348(W, 21)

Here Y7 has been divided by (GD)

Inauguration ceremony of a rural public library

Y31: 348(22)

Aryan Civilization

Y73 (P1): 1

Indus Valley Civilization in 3500 BC

Y: 1.44.g1'B6499

Naming ceremony of Hindu children

Y73 (Q2): 3411

Superstitions about devils among the Christians

Y73 (Q6): 35412

Here Y : 354 has been sub-divided as [P₂] of Mysticism and then from [P₃] of ND Sculpture.

Moon in Dravidian Folklore

Y73 (P3) : 351282

Here the borrowing has been triple: first from [P₂] of s then [P₃] of ND, and lastly from [P] of B9.

Superstitions about earthquakes among the Hindus

Y73 (Q2) : 354(H4132)

Arm ornaments of Stone Age

Y714: 8663

Here Y : 86 has been subdivided as 1[P] of L Medicine.

Earrings worn by Asians

Y74: 8683

- Mining instruments of the Jews
Y73 (Q5): 83(HZ)
- Medical instruments of the Semitic people
Y73 (P2) : 83(L)
- Water boats of the primitive Australians
Y72-78: 852
- A social study of suicides among the wives in Europe
Y2215: 45111.5
- Social life of Doctors
Y9 (L)
- Alcoholism among the musicians
Y9 (NR) : 411
- Rural Development
Y31: 7: 7
- Character improvement
Y: 74: 7
- Etiology of over population in India
Y: 52: 2.44
- Population control by legislation
Y: 5: 5(Z)
- A social study of war crimes in Bangladesh
Y: 45ZA. 44Q71
(Y:45 has been sub-divided as Z, 5 crimes, where Z, 5ZA is war crimes Law).
- Influence of overpopulation on crimes - a social study
Y: 45 or 52
- Difference between the population densities of rural and urban areas
Y310w3: 58
- Guru Nanak Journal of Sociology (Indian 1980+)
Ym44, N8
- Indian Sociological Bulletin (1963+)
Ym44, N63
- Sociological Abstracts
Yam73, N
- Journal of Marriage and Family (US, 1938+)
Y2m73, N3
- Netherlands Sociological Society, 1963
Y.5952, g, 9N6
- National Institute of Rural Development, Hyderabad 1958
Y31: 7: 7.44, d, 9N5

Self-Check Exercise-3

1. Magneto Therapy of paralytic patients.
2. Naturopathy treatment of Beriberi disease in the rice eating countries.
3. Ayurvedic treatment of eye disease of old persons during war.
4. Constitution of the Indian Council of Medical Research (ICMR), New Delhi (founded in 1952).
5. Rice farming in the eastern part of Kerala during winter.
6. Harvesting of wheat in Godaveri Delta.
7. Treatment of disease in the soilness farming in hilly regions of Himachal Pradesh.
8. Fundamentals of Indian agriculture report (1960).
9. Prevention of tuberculosis in poultry.
10. Surgery of the virus disease of Mule.
11. Cold storage of cow milk.
12. Dairy farming development in the Madras city.
13. The influence of urban culture on rural culture in the new millennium in developing countries.
14. Naming ceremony of Hindu children.
15. Etiology of social tension in Poland in 1980s.
16. Conservation of Aryan culture in India.

Further Readings

1. **RANGANATHAN (S.R.)**. Colon classification. Ed. 6. Bangalore: Sarda Ranganathan Endowment for Library Science, 1960.
2. **KAULA (P.N.)**. A treatise on colon classification. New Delhi: Sterling Publishers, 1985.
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4. **SEWA SINGH** : Colon classification.: New Practical Manual. Delhi: B R Pub.2006.
5. **SATIJA (MP)** : Colon Classification : A Practical Guide: New Delhi : Satija Research Foundation in Library & Information Science 2013.

BOTANY, ZOOLOGY AND PHARMACOGNOSY

Objectives :

This chapter gives the procedures and practical exposure of three basic classes of botany, zoology and pharmacognosy. After reading this chapter you will be able to:

- * *Learn to construct complex and compound class numbers in the respective classes.*
- * *Learn the methodology for classifying the documents and their facet formulas*
- * *Make class numbers of the titles as given under the class*
- * *Make your answer checks from the solved answers.*

I BOTANY

Facet Formula : I [P], [P2]: [E] [2P]

A sovereign branch of G Biology, it has plants and vegetative life for its objects of study.

[P] its the kind of plant, the natural group. Enumeration is based on the scientific principles of plant taxonomy.

[P₂] is the part (organ) of the plant. Its isolates have been enumerated, and if further required, isolates may be borrowed from the [P] of L Medicine.

[E] cum [2P] denotes the life processes. Its isolates are the same as that the [E] cum [2P] of C Biology. Not only this, G Biology, I Botany, K Zoology and to a large extent L Medicine have a common energy schedule. Paleobotany an additional energy isolate of I Botany.

In a nutshell I Botany is one of the simple schedule. A special index to the the natural groups, i.e., the Personality Isolates has been provided immediately after the schedule on pages 2.61 to 2.63. It is very useful for classifiers not familiar with botanical names of plants. It may be reminded that the two peculiarities of G Biology are equally valid here:

Journal of Indian Flora (Clacutta, 1960+ : a hypothetical case)

I: 13.44mN

British Journal of European Plants (1970+)

I: 13.5m56, N

Chemical effect of sulphur on Plant Tissues

I, 12 : 33E : 161

Nitrogen Metabolism in Plants

I: 33 : 150

Plant Classification (Taxonomy)

I: 11

Since there exist various systems of Plant Classification so these may be treated as Systems: and the various systems may be got by (CD):

Ohn Ray's System of Plant Classification (Propounded in 1660)

I: 11K

Linnaeus System of Plant Classification (formulated in the 18th century)

I: 11L

Hooker-Benthian Plant Classification

I: 11N

Tissues of dicotyledons

I8, 12

Premulates leaf morphology

I845, 15: 2

Fungi nomenclature

I23 : 11

Himalayan Flora

I: 13.4.g7H

International Conference on Himalayan Flora (New Delhi, 1979)

I: 13.4.g7Hp1, N79

Dictionary of Plant Ecology

I: 5k

Development of Thallophytes

I2 : 7

Reproduction in flowering plants

I5 : 67

Microscopic Botany

I: 19

Bark of Daphnales

I885, 87

(Bark, may be taken as the skin of the plants. Therefore [P₂] 87 has been borrowed from the [P] of L Medicine. This is in accordance with the instructions given under [P₂] of the Botany Schedule at page 2.60).

Nervous system of Plants

I, 7

Paleobotany

I: 8

Cainozoic Rosales Fossils

I831: 8 'A4

(Here, Time Isolate has been got in the same way as we got in HG Palaeontology, i.e., by replacing H5 by A).

Fossils of Recent Bryophyta

I3: 8'A55

Cretaceous Fossils of the leaves of Pteridophyta

I4, 15: 8'A34

Botanica (Journal of Botany, India, 1950)

Im44, N5

Bulletin of the British Mycological Society (1967)

I23m56, N6

Botanical Survey of India (1890)

I.44, f2, 9M

National Botanical Research Institute

I.44.f, 9N

Indian Botanical Society

I.44, g, 9N

Report of the Birbal Sahni Institute of Paleobotany (Lucknow)

I: 8.44, d, Br

Life of Linnaeus (1707-1778)

IwL07

Comparative Study of Primary and Secondary roots of Dicotyledons

I8, 1320v3

K ZOOLOGY

Facet Formula: K [P], [P2]: [E] [2P]: [2M]

Another independent branch of biology, which has the animals as object of study.

[P] is the kind of animal - the natural groups. The grouping of animals is an commonly accepted scientific basis. The enumeration of animals is not down to the species level, but only upto the sub-order stage. The further sub-divisions, if required, may be carried out on the same pattern with the help of the *Cambridge Natural History* (Rule K12 p. 1.86). Enumeration of animals upto the stated extent (sub-order stage) is exhaustive. In their Personality Isolates the nomenclature used is technical. To ease the difficulties of the classifier, not adept in Zoology, an alphabetical Index of all the Personality Isolates has been given immediately after the schedule (at pages 2.73-2.78). It is also a warning that these natural groups have not been included in the general index.

[P₂] is the body organ. Its isolates are the same as the [P] of L Medicine. But wherever the terms in these two parallel schedules do not match exactly, the analogous

terms may be used. For example in case of wings of birds, there is no term for wings enumerated in the [P] of L. Therefore, for "Wings" we can use the term arms. Similarly, for feathers, we can use the term hair. But more often than not, this system fails. We do not have terms (nor even analogous) for tail, crown, and trunk in L Medicine.

[E] cum [2P] denote the life process. They are the same as that of G Biology. Two additional energy isolates have been enumerated.

[2M] : It may be remembered that [2M] may be required in case of K: 3 and its subdivisions.

Similarly the isolates from K : 12 to K : 18 may require the immediate addition of Space facet.

Books on Paleozoology are classified in H6 Palaeontology.

Animal Autopsy

K : 4798

Bird Anatomy

K96 : 2

Vertebrate Taxonomy

K9 : 11

Chemical effect of phosphorous on eyes of birds

K96, 185: 33E; 151

Animal Kingdom of Nepal

K : 12.44974

Journal of Indian Fauna, 1912+

K : 12.44mN or K : 12.44m44.N*

(See another example at page p. 1.79, CC-6 (1963).)

Oxford Pictorial Encyclopaedia of Animals of South-East Asia (1965)

K: 14.43k56, N

Nervous diseases of mammals

K97, 7 : 4

Rearing among wild animals

K9954: 591

Courting among Primates

K9797: 595

Effect of Atmospheric temperature on Mammal's Physiology

K97: 30gU284

Bangladesh Journal of Zoology, 1973+

Km44Q71, N7

Journal of Mammalogy (USA, 1919+)

K97m73, N

Indian Journal of Entomology, 1939+

K86m44, N3

- Insect Atlas of India (1965)
K86: 12.44f N7
([T] is upto the (LED))
- Indian Association of Systematic Zoologists (Calcutta, 1947)
K: 11.44, g, 9N
- Report of the International Committee on Zoological Nomenclature (1895)
K: 11.1 'M95t5
- International Council for Bird Preservation (London, 1922)
K96: 54.1, g, 9N
- Anatomical differences between Vertebrates and Invertebrates
K10n9: 2
- Comparative study of Physiology of Ayes and Mammals
K960v7: 3
- Collected Physiological Works of Claud Bernard (1813-1878)
K: 3xM13
- The fall of a Sparrow: Autobiography of the great Indian Orinthologist, Dr. Salim Ali
(1896-1987)
K96wM 96, I
- Anatomy of Wings of Birds
K96, 163:2

LZ PHARMACOGNOSY

Facet Formula: LZ [P]: [E] [2P]

It is a science of preparation and study of medicines and drugs. In the CC LZ Pharmacognosy seems an obscure main class, mostly for the reason that it is least illustrated. Not only there are no examples illustrating the use of the schedule, also some of the statements are less than pinpointed.

At the first instance this main class has been divided into canonical classes:

LZ3	Pharmacology
LZ5	Pharmacopoeia
LZ8	Pharmacy

Facet Formula for LZ3 is : LZ3 [P] : [E] [2P]

It is stated that [P] is to be got by enumeration, whereas actually nothing has been enumerated for [P]. It is presumed that it is the same as the [P] of E Chemistry.

[E] means the action of the drug, and its isolates have been enumerated.

[2P] is the body organ on which drug action takes place. It is to be got by (SD):

Fluoride drugs stimulation in teeth

LZ3 170: 2 (L214)

(170 part of the WI isolate comes from the [P] of Chemistry)

Benzoids depression in kidneys

LZ371: 3 (L51)

Stomach irritation caused by iron

LZ 3182: 5 (L24)

Heart depression by Potassium

LZ3 112: 3 (L32)

Heart stimulations by calcium chloride

LZ342271: 2 (L32)

Intestine depression by Magnesium chloride

LZ342171: 3(L25)

Hydrochloric acid replacements in stomach

LZ3371: 8(L24)

LZ5 Pharmacopoeia means the list of standards for the drugs.

The facet formula is

LZ5 [P₁], [P₂]

[P₁] stands for the country and is obviously to be got by (GD)

[P₂] is the kind or order - isolates have been enumerated.

British Pharmacopoeia (BP)

LZ556, 1

Pharmacopoeia Universalle

LZ51, 1

New Non official Remedies (NNR) (USA)

LZ573, 2

Pharmaceutical Journal (UK, 1841)

LZ8m56. M4

Americal Journal of Pharmacy (1886)

LZ8m56, M8

Eastern Pharmacist (India, 1968+)

LZm44, N6

American Society for Pharmacology (1959)

LZ3.73, g, 9N5

American Pharmaceutical Association (1852)

LZ8.73, g, 9M

Self Check Exercise-4

1. Life and works of JD Hooker (Born in 1817).
2. Morphological study of the flowering plants of desert of India.
3. Bulletin of Indian seed sciences published by IARI Pusa, New Delhi since 1978.
4. Function of the director of the Birbal Sahni Institute of Paleobotany, Lucknow

(Founded in 1968).

5. Migration of birds from India.
6. The world of the insects of the agricultural countries.
7. Scientific journal of Indian Animal Physiology published by ICAR since 1988.
8. A documentary report on animal behaviour.
9. Indian Pharmaceutical Guide 1964.
10. Glossary of Elementary Pharmacology.
11. Indian Pharmaceutical Codex.
12. British Encyclopedia of Pharmaceutical Sciences (1976).

Further Readings

1. **RANGANATHAN (S.R.)**. Colon classification. Ed. 6. Bangalore: Sarda Ranganathan Endowment for Library Science, 1960.
2. **KAULA (P.N.)**. A treatise on colon classification. New Delhi: Sterling Publishers, 1985.
3. **SATIJA (M.P.)**. Manual for practical colon classification. Rev Ed.3. New Delhi: Sterling Publishers, 1995.
4. **SEWA SINGH** : Colon classification.: New Practical Manual. Delhi: B R Pub.2006.
5. **SATIJA (MP)** : Colon Classification : A Practical Guide: New Delhi : Satija Research Foundation in Library & Information Science 2013.

FINE ARTS, LINGUISTICS AND RELIGION

Objectives :

This chapter gives the procedures and practical exposure of three basic classes of fine arts, linguistics and religion. After reading this chapter you will be able to:

- * *Learn to construct complex and compound class numbers in the respective classes.*
- * *Learn the methodology for classifying the documents and their facet formulas*
- * *Make class numbers of the titles as given under the class*
- * *Make your answer checks from the solved answers.*

N FINE ARTS

Facet Formula : N [P₁], [P₂], [P₃], [P₄]: [E]

N Fine Arts has been divided into canonical classes such as NA Architecture, NB Town Planning, ND Sculpture, NQ Paintings, and NH Music, and many more. It is one of the few main classes where personality spreads itself to a full spectrum. It exists in four levels in many of the canonical classes.

Every canonical class of Fine Arts is first divided by style, then by utility and lastly, if necessary, by part. Style is covered appropriately by (GD) and (CD) forming [P₁] and [P₂] respectively.

[M] is the medium of art and is required only in Paintings, Sculpture and Music. In NR Music, [M] denotes the kind of the musical instrument.

[E] cum [2P] represent the method or the process involved in a particular art. Let us discuss each (CC) separately for particularization.

NA ARCHITECTURE

The formula is: A [P₁], [P₂] [P₃], [P₄]: [E]

Note that there is no comma between [P₂] and [P₃] in accordance with a general rule*. [P₁] and [P₂] jointly constitute the style and are denoted by (GD) and (CD) respectively. (CD) is worked upto the century digit only.

Mughal Architecture

NA44, J

Indian Architecture of Victorian Era

NA44, M

European Architecture

NA5

([P₂] is absent)

[P₃] is the kind of building. Its isolates have been enumerated and rest may be got by (SD).

[P₄] is the part of the building:

Hotel Architecture of Victorian India

NA44, M44

Floors of Hotels in Victorian India

NA44, M44, 3

Decoration of Urban houses in Renaissance Europe

NA5, J33, 99

Models of elementary schools in Modern India

NA44, N8(T15): 8

Model walls of elementary schools in India

NA44, N8(T15), 41 : 8

Architecture of Indian Textile Mills Buildings

NA44, 8(M7)

Ceiling Architecture

NA, 633

In this case [P₁], [P₂] and [P₃] all are absent. But there may be confusion in retranslation. One may not be sure whether the isolate number 633 is [P₃] or [P₄].

National Library Architecture

NA, 2213

Plans of Mughal Hospital Ceilings

NA44, J8(L), 633 : 3

Location of academic library buildings in Renaissance Europe

NAS, J223 : 1

Journal of Architectural Research (UK, 1970)

NAm56, N7

Academy of Architecture, Bombay

NA.44.B, e4, A

NB TOWN PLANNING

In its facet formula and isolates NB Town Planning is closely parallel to NA Architecture.

[P₃] stands for the region of planning whether city, village or town. Isolates have been enumerated.

[P₄] stands for parts of [P₃] i.e., the building to be planned, isolates have been enumerated. Theatre in contemporary Indian Villages Planning.

N844, N1, 691: 3

Planning of village markets in Victorian England

N856, M1.5 : 3

Location of Public Baths in Mughal Towns

NB44, J3, 62 : 1

Town Planning in India today

NB44, N

Provisions of Parks in Metropolitan clues

NB, 7, 66

(Here [P₁] and [P₂] are absent)

Urban and Rural Planning Though (India, 1958+)

NBm44. MS

Guru Ram Das School of Town Planning (Amritsar)

NB.4443,e4, G

Report of the Indian Institute of Town Planners

NB.44, e4, 9Nr

Difference between Town and City Planning

NB, 30n5

ND SCULPTURE

It is the art of casting and moulding three dimensional figures.

[P₃] stands for the object to be cast. Its isolates have been enumerated. Rest can be got by (SD). There is no [P₄] but [M] may be required - the material in which casting is done.

The facet formula is: ND [P₁], [P₂] [P₃] [M] : [E]

Designing human busts in Marble

ND, 18: 3: 4

(Here [P₁] and [P₂] are absent)

Bronze coin casting in Buddhist India

ND44. C71 : 5 : 5

Buddhistic stone Iconography

ND44, C9(Q) : 4

Sculpturing Rocks in Wood

ND, 8(H2) : 1

Pala Sculpture (Bihar)

ND4453, D.

NQ PAINTINGS

[P₁], [P₂] and [P₃] are the same as ND sculpture. Accordingly there is no [P₄]. [M] is

the medium or the surface on which a painting is drawn.

[E] cum [2P] represent the method or various process of paintings.

I

Indian Fresco Water colour Paintings

NQ44 : 3 : 3

Landscape in Mughal Paintings

NQ44, J3

Preservation of distemper Paintings about animals on Glass

NQ, 5 : 6 : 6

Comparison of oil coloured and water coloured Renaissance Fresco Paintings

NQ5, J : 3 : 30m4

Life of Picaso

NQ541, NwM81

South Indian Society of Painters (Madras)

NQ.441, g, S

Bengali National School of Paintings

NQ4475, N

Kangra School of Paintings (18th century)

NQ443682, L

Paintings depicting Hindu myths from the Kangra School of Paintings

NQ443682. L8(Q2 : 8)

Biblical scenes in Gothic Paintings

NQ5, F8(Q6 : 21)

Paintings on Indian History

NQ, 8(V44)

NR MUSIC

[P₁] and [P₂] constitute the style.

[P₂] is the kind of music.

[M] is the musical instrument*.

[E] cum [2P] means the technique of music. Isolates have not been enumerated.

They are to be worked out:

Jazz Music

NR7S, N

European Orchestra

NR5, 92

* It may look very odd that the musical instruments have been enumerated under the matter facet. But it is quite appropriate according to the theory of music that music already is there in the cosmos. It is only through the medium of Instruments that it is made audible.

Indian Flute

NR44: 22

20th century American Kettle-drum Dramatic music

NR73, N91: 42,

Life of Pt. Ravi Shanker

NR44wN20

International Music Centre (1961)

NR.1, d, N6

International Society for contemporary Music (1922)

NR, N.1, g, 9N2

Some topics on art in general:

Art Society of India (1918)

N.44, g, 9N2

All India Fine Arts and Craft Society (New Delhi) 1928

N.44, g, 9N2

Bombay Art Society

N.44.B, g, B

Functions of Lalit Kala Akademi (1954)

N.44, d, 9N5 : 2

International Association of Art (1949)

N.1, g, 9N49

Rajeshvari Kala Sangam (Jalandhar)

N.4443, e4, R

Art Journal (USA, 1941+)

Nm73, N4

History of Indian Cinema (1950)

NW44v 'N5

National School of Drama (New Delhi)

NT.44, e4, 9N

Kathak Dance

NS44, J

In case of collection of Art works the digit x should be added to the ultimate class numbers. It should further be amplified by (AD) using the name of the artist. To it a work facet preferably got again by (AD), may be added in case of a particular artifact.

Leonardo da Vinci's Monalisa

NQ52, JxL, M

Last Supper by Leonardo da Vinci

NQ52, JxL, L

Collection of Rabindranath Tagore's Paintings
NQ4475, NxT
Beethoven's Namensfair (an orchestral music)
NR55, M92xB, N

P LINGUISTICS

Facet Formula: P [P₁], [P₂] [P₃]: [E] [2P]

Linguistics is the science of languages. The schedule of P linguistics is difficult and easy both. The main difficulty arises in [P₂], which consists of not one but two facets - a unique case. These are variant facet and the stage facet, Variant of a language means the geographical variations in a given languages - the different dialects of a language at a given time. It is denoted by 9D which is further sharpened by (GD), i.e., the area in which a particular dialect is spoken.

[P₂] also covers the stages of a language - which means the change caused in a given language by time. Every language changes with time. Such changes are very slow and are perceptible only after centuries. It is only denoted by the century of epoch. Obviously stage is denoted by (CD). *AND IF BOTH THE STAGE AND THE VARIANT FACETS ARE PRESENT SIMULTANEOUSLY THEN WE [P] SHOULD BE FOLLOWED FIRST BY STAGE AND THEN BY VARIANT. A COMMA SHOULD BE INTERPOSED BETWEEN THE STAGE AND VARIANT FACETS. (Rule P92Z page 1.1.05).*

[P] is the language under study.

[P₃] is the linguistic element.

[E] cum [2P] are the linguistic problems.

The formula is: P [Language], [Stage], [Variant], [Element]: [Problem]

English Language

P111

Modern English

P111, J

(Here in [P₂] variant is absent, only stage is present)

Dialects of English

P111, 9D

Dialect of

Nottinghamshire Dialect of English

P111, 9D56176

Nottinghamshire Dialect of Modern English

P111, J, 9D56176

Clause analysis of London Dialect of Modern English

P111, J, 9D56124, 5:33

In case of Jargon the above formula is bit reversed: 9J is amplified by (GD) and to it

is added (CD). (GD) and (CD) are separated by a comma.

Anglo-Indian Jargon

P111, 9J44, L

Contemporary Lakhnavi Urdu

(Lucknow Dialect of contemporary Urdu)

P168, N, 9D445292

A dictionary of contemporary Canadian-French phrases

P122, N, 9D72, 4: 4k

Sri Lankan dialect of Tamil

P31, 9D4498

Dialects of Korean Language

P495, 9D

(Korean Language has been got by (GD))

A Linguistic study of the Wu Language

(Chinese dialect spoken in Chekiang)

P41, 9D4113

Semasiology of Thai Dialects

P433, 9D : 4

Rules for constructing isolate numbers for artificial and other languages not enumerated in the schedule at pages 2.26-2.27, have been discussed in the chapter of language isolates.

Grammar of Bihari Language

P1594473: 5

A study of verbs of Korean Language

P495, 35

Old Hindi Phonology

P152, D: 1

Middle Hindi words

P152, F3

It may be noted that [P₃] immediately follows the stage facet then there is no need of comma between [P₂] and [P₃].

Analysis of simple clauses in Vedic Sanskrit

P15, A561 : 33

Borrowed words in Modern Hindi

P152, M305

Vowel pronunciation in old French

P122, A11 : 1

Chhatisgarhi Hindi phrases

P152, 9D447111, 4

A peculiar exception to the facet formula occurs in the co-occurrence of energy

isolates from 4 to 58 and the element number, i.e. [P₃] 3. In such cases the element number, i.e. 3 in [P₃] is to be omitted.

English Dictionary

(A dictionary gives meanings of words)

P111, 3: 4k

= P111 : 4k

Borrowing of words in Punjabi Language

P153, 3: 58 = P153: 58

Coining new words in Russian Language

P142: 53

A dictionary of Phrase meanings of English Jargon

P111, 9J, 4: 4k

Hindi *Kahavte*

P152, 6: 4

Bilingual dictionaries pose no problem in the CC. In the class number only the first language i.e. the languages in which the words are given is considered as personality. The language in which the meanings are given is considered the language of exposition, which is represented in the Book Number.

Sanskrit-Hindi Dictionary

P15: 4k

Sanskrit-English Dictionary

P15: 4k

Old German-English Dictionary

P113, D: 4k

Specialized subject dictionaries are to be put in their respective subjects.

Dictionary of Science in English

A: (P111) k

English-Punjabi Dictionary of Political Science Terms

W: (P111) k

":(G)" is to be put for comparative study of languages.

Comparative study of Dravidian Languages

P3: (G)

Some of the isolates in [P₃] have there own Common Isolates:

Nasal Mixed Vowels of the English Language

P111, 11508

Here "08" is the Common Isolate standing for Nasal. Being a (CI) it has been directly added to the ultimate class number P111, 115 Mixed vowels of the English language. It means that 08 is a special kind of (ACI).

Lateral bilabial consonants of Pakistani Punjabi

P153, 9D44Q7, 15802

Predental Voiced consonants

P, 166

Fricative predental voiced consonants

P, 16604

Plosive closed unvoiced consonants

P, 17101

Circular rolled unvoiced consonants of Burmese Language

P438, 17203

Grammatical aspects of composing English poetry

P111, 71: 2

Figure of speech in novels - a linguistic study

P; 73: 75

Another very peculiar rule exists in the grammatical study of Vedas - in Vedic Sanskrit P15, A. In this case the digit A is to be preceded by at least two digits, the first digit standing for the particular Veda and the second for its version. These digits are to be taken from the chapter Q Religion in part 3, page 3.22.

Grammar of Sama Veda

P15, 31A: 2

The digits 31 preceding A have been taken from Q131 Sama Veda.

Tense in Vajasaneya

P15, 26A: 27

Taittiriya word composition

P15, 25A3: 291

Vedic Sanskrit Adverbs

P15, A36

Teaching of any language like teaching of any other subject will go to T Education.

Teaching of English language to foreigners in England

T35: 3(P111). 561

Teaching of Hindi Language in Secondary Schools

T2: 3(P152)

Teaching of mother-tongue in elementary schools

T15: 3(P1)

Teaching of classical languages in universities through mother-tongue

T4: 3(P8), 31

A comparative study of phrases and clauses

P. 40m5

Difference in the translation technique of simple and complex sentences of English Language

P111, 6013w7: 795

- Journal of Language of Poems (USA, 1972+)
P, 71m73, N7
- Anuvad: A journal of Translation, (1964+)
P: 795m44, N64
- All India Seminar on Linguistics (New Delhi, 1975+)
Pp44, N75
- Bibliographic on Linguistic Research in India (1973)
P: f.44aN7
- A Comparative study of Indian Languages
P44: (G)
- A Comparative Grammer
P: 5: (G)

Q RELIGION

Facet Formula: Q [P₁]: [E] [2P]

It is one of the simple schedules in the CC. In some cases of religions of Indian origin, especially Hindu religion, the provision exists relatively for minure classification. The facet formula is:

Q [P]: [E] [2P]

[P] is the religion itself. Its isolates have been enumerated mostly. Others may be got by (GD) or (CD) - such places have been indicated in the schedule.

[E] cum [2P] enlists the religious practices beliefs and institutions

Rigvedic Mythology

Q11: 1

Religious practices of Ahmadiya Muslims

Q78M9: 4

Kathaka Grahyasutra

Q122: 42

Kanva Dharmasutra

Q128: 44

Saunakiya Samhita

Q141: 21

Taittiriya Gotrapravara

Q125: 46

Religious rites in Parsis's marriage

Q8451: 427

Bible

Q6: 21

Q:2 is scriptures and it has to be further subdivided according to the religion. In part 3 of the CC, Ranganathan has enumerated in detail the religious classics mostly Indian and a few foreign. Their class numbers have been obtained with the help of the Classic Device. On page 3.32, the number for the Bible and its various books have been enumerated as follows :

Q6: 21
Bible
Q6: 22
Old Testament
Q6: 2225
Songs of Solomon
Q6: 23
New Testament
Q6: 231
St. Matthew
Q6: 235 Acts
Q6: 294
Apomypha

Similarly,

Sri Guru Granth Sahib (Sikh Scriptures)
Q8441: 2
Sri Guru Nanak Dev Ji - The Founder of Sikh Religion
Q8441: 33
Biography of Jesus Christ
Q6: 33y7
Lives of Biblical saints
Q6: 332y7
The Holy Quran
Q7: 2
Traditions in Zen Buddhism
Q4596: 26

In case of Q: 38 Sthala Purana, [E] 38 is to be further amplified by (GD). It is to be divided as the Geographical isolate 44.

Sthala Puranas of South Indian (Space Isolate for South India is 441)

Q2: 381
Sthala Puranas of Kanshi
Q2 : 385213
Sthala Purana of Madura
Q2: 38134

(The (Space Isolate) for Madura is 44134 and for Kanshi it is 445213)

Hindu Temples

Q2: 45

Influence of scriptures on Mythology

Q: 10r2

A comparative study of the sacred books of Buddhists and Jains

Q3 0m4: 2

Difference between Roman Catholic and Protestants Traditions

Q620w3: 26

Catholic Digest (India, 1960+)

Q62m44, N6

Hindu Vishva (India, 1966+)

Q22m44, N6

Journal of Religion (US, 1882)

Qm73, M8

Journal of Sikh Studies (India 1974+)

Q8441m44, N74

Tradition: Journal of Orthodox Jewish Thought (1958+)

Q5m73, N5

International Theosophical Society (1877)

QM: 68.1,g, 9M

YMCA (India)

Q6: 6811.44,g, 9N

World Council of Churches (1948+)

Q6: 6.d. 1,g, 9N4

Self Check Exercise-5

1. Architecture of American textiles mills building.
2. Model of elementary schools in modern Delhi.
3. Theatre in contemporary Pakistan villages planning.
4. Iconography
5. Journal of Indian Film Culture (1962)
6. Collection of Munsri Premchand's paintings.
7. Hindi English Dictionary (1960)
8. English typewriting
9. Journal of English published from Mumbai (1989)
10. Composition of words in classical Hindi
11. A study of the rebirth according to Hindu religion.
12. Quran: A holy book of Muslims.
13. Sikh religious institutions

14. English-Hindi dictionary of Quran.

Further Readings

1. **RANGANATHAN (S.R.)**. Colon classification. Ed. 6. Bangalore: Sarda Ranganathan Endowment for Library Science, 1960.
2. **KAULA (P.N.)**. A treatise on colon classification. New Delhi: Sterling Publishers, 1985.
3. **SATIJA (M.P.)**. Manual for practical colon classification. Rev Ed.3. New Delhi: Sterling Publishers, 1995.
4. **SEWA SINGH** : Colon classification.: New Practical Manual. Delhi: B R Pub.2006.
5. **SATIJA (MP)** : Colon Classification : A Practical Guide: New Delhi : Satija Research Foundation in Library & Information Science 2013.

**PHILOSOPHY, USEFUL ARTS AND
SPIRITUAL EXPERIENCE AND MYSTICISM**

Objectives :

This chapter gives the procedures and practical exposure of three basic classes of philosophy, useful arts and spiritual experience and mysticism. After reading this chapter you will be able to:

- * *Learn to construct complex and compound class numbers in the respective classes.*
- * *Learn the methodology for classifying the documents and their facet formulas*
- * *Make class numbers of the titles as given under the class*
- * *Make your answer checks from the solved answers.*

R PHILOSOPHY

Facet Formula : R [P], [P2]: [E] [2P]

Now-a-days philosophy is more an applied object - a sort of tool or methodology. In the CC it has been divided first on the canonical basis, such as Logic, Epistemology, Metaphysics and Ethics. Various systems of philosophy have been put in R6 to R8. R6 has been reserved for the most favoured system. Inevitably in the CC it is meant for the Indian Philosophy. R7 is meant for the second favoured system. Philosophies of all other nations have been placed in R8, which is sharpened by (GD). It is a typical case where the systems have been got by (GD) instead of (CD). There is no way to assign a succinct class number to various philosophical concepts such as Existentialism, except to put them in the philosophy of the country where enunciated first:

Symbolic Logic

R14

Fundamental categories

R199

Various postulates about categories may be got by (CD) - treating them as systems:

Aristotle's views on categories

R199C

Rangarathars Five Fundamental Categories

R199N5

Philosophies of various subjects are put in the subjects themselves, where R is applied as an Energy Facet got by (SD):

Philosophy of History

V : (R)

Philosophy of Mathematics

B : (R)

But the Philosophical aspects of the theory of Religion are put in R3 Metaphysics, and further fitted with a [P₂] got by (SD). Thus the facet formula for R3 Metaphysics is:

R3 [P], [P₂]

[P₁] is regarded as view. Its isolates have been enumerated.

[P₂] is the subject matter of metaphysics and is obviously got by (SD):

Christian Philosophy

R3, (Q6)

Metaphysics of number theory

R3, (B12)

Economic Value

R37,(X)

Similarly the facet formula for Ethics is

R4 [P], [P₂]

[P] may be taken as the sphere or jurisdiction of Ethics.

[P₂] is named as the controlling view, or the limiting factor.

Family Ethics of Royalty

R42, (Y51)

State Ethics in a representative democracy

R43W61

Ethics in Indoor Games

R463

Ethics about temperance among the leaders

R413, (Y48)

Buddhist kindness towards Animals

R47, (Q4)

Ethics of Librarianship

R442

Personal Ethics of Economists

R41-4X

The facet formula for R6 Indian Philosophy is:

R6 [P₁], [P₂]

[P₁] covers various schools of Indian Philosophy

[P₂] (1) lists the sources of Indian Philosophy, applicable only from R65 to R6893.

(2) other views in Indian philosophy, are to be taken from R itself.

Yoga Philosophy

R635

Mahayana Philosophy

R6945

Bhagvad Gita

R68

Mahabharata

R68, 8

Bhagvata

R6893, 7

Brahma Sutra

R65, 5

Theory of Epistemology according to Hindu Philosophy

R61, 2

Symbolic Logic of Purva Mimansa

R64, 14

Vaisesika Inductive Logic

R621, 11

Probability in Yoga Philosophy

R635, 198

Metaphysics in Bhatta Mimansa

R641, 3

Vedanta Logic

R65, 91

Here [P₂]9 has been divided as R, (R1 is Logic)

Vaisnava Epistemology

R672, 92

Theory of Aesthetics according to Jaina School of Philosophy

R693, 95

R8 is to be sharpened by (GD) to get the philosophical systems of various countries.

British Philosophy

R856

American Philosophy

R873

Greek Philosophy

R851

Greek Epistemology

R851, 2

And those who do not place Indian Philosophy in R6, may put it as:

R844

Difference between inductive and Deductive Logic

R110w2

Life of John Lock (1632-1704)

R856wK32

Collected philosophical works of Australian Philosopher Samuel Alexander (1859-1938)

R88xM59

Journal of Philosophical Logic (Netherlands, 1972+)

R1m44, N7

Indian Institute of Philosophy (1916)

R.44, d, 9N1

Association of Symbolic Logic (USA, 1936)

R14.73, g, 9N3

M USEFUL ARTS

Facet Formula: M [P]; [M]: [E] [2P]

This class holds books on applied or industrial arts and crafts. For applied aspects of sciences and engineering, it is a sort of a hold all miscellaneous class. Impliedly it complements D Engineering, F Technology and even HZ Mining. Making of miscellaneous types of tools, machines and instruments also go in this main class. Home science, textile engineering, sports and indoor games are also its parts. Its place among the main classes indicates that Ranganathan treats it as the culmination of all the natural sciences. Processes which start with A end in M.

It is one of the most used class but hopelessly inadequate in enumeration. Ranganathan forewarns that "the schedule is only brief and illustrative" (Sec. M01, p. 1.91). The number of such subjects is infinite, he says further (Sec. M02). The schedules of M7 Textile and MJ7 Rope-making are only illustrative. On this analogy, the isolates for other branches of useful arts may be made. On the first instance the class has been fragmented into canonical divisions. Though it has not been stated but is quite obvious that for sub-divisions the main class digit M has been amplified by the Pseudo subject device. For example, in:

MD53 Aviation

D53 is air vehicles. Again in MB1 calculating machines, B1 represents the arithmetic. Further in "MNR Musical Instrument Making" NR is the canonical class for Music from the schedule of N Fine Arts. On these analogies other canonical classes can easily be enumerated:

Watch making

MC86

Balance making

MC11

Geometrical Instruments

MB6

Barometer

MU282.

Changes in the schedule should be carefully noted. Starting from M3 Domestic Science to M98 Packing at the end of the first column of page 2.88, a revised schedule has been provided at page 27 of the Annexure. Consequently the energy isolates of MJ7 Rope making are also to be taken from this annexure (p. 27 of CC-6).

Glass Making

M5

Photography

M95

Culinary Art

MA3

Women and Home (1926+)

MA3m56, N2

Spinning silk yarn

M71; 3: 1

Weaving Jute carpets

M75; 7: 3

Dyeing Cotton Cloth

M73; 1: 8

Cotton Cloth

M73; 1: 8

Cotton Ginning

M7; 1: 2

Hemp carding

M7; 6: 5

Cotton Ropes

MJ71

Twisting Jute Ropes

M375: 2

Wrestling

MY245

The flying Sikh: Life of Milkha Singh (born in 1940)

MY225wN40

A Profile of Bishan Singh Bedi

MY2141wN47

Life of Mohammad Ali

MY241wN42
 A History of Indian Hockey (1910-1980)
 MY2143v44 'N80 <—N10
 Difference between Athletics and Indoor Games
 MY20n3
 Indian Textile Bulletin (1955)
 M7m44, N55
 Indian Journal of Photography (1976+)
 M95m44, N7
 Sports Review
 MYm44, N5
 Royal Photographic Society of Great Britain (1853)
 M95.56, g, 9M
 Olympic Association of India
 MY.44, g, 9N
 Hockey Association of India
 MY2143.44, g, 9N

Δ SPIRITUAL EXPERIENCE AND MYSTICISM

Facet Formula: [P], [P₂]: [E] [2P]

Please treat to Δ as Delta Symbol

From the methodological viewpoint knowledge may be divided as objective and subjective. Objective knowledge is emirical in nature. It is based on direct evidence through sense perception. Anybody with a moderate degree of intellect and required amount of labour may have the access to it. In the Colon Classification the whole of this kind of knowledge has been put in the main classes denoted by the digits a - z, 1 - 9, A - M and N - Z. Subjective knowledge is gained through a sort of inner experience - a direct revelation from the cosmos without sense perception. It transcends logical methods. It is founded on perception and faith rather than on reason. In library classification this kind of knowledge is usually classed with magic, religion and Parapsychology.

In the CC this kind of knowledge has been capsulated in the main class "Δ Spiritual Experience and Mysticism Ranganathan forewarns that it is self-deluding to call it irrational. Of all the existing schemes, it is only the Colon Classification which has accorded main class status to this kind of knowledge. Perhaps this is one of the reasons that this scheme has been mistaken as strong in Indian subjects. Mysticism and spiritual experiences are not of Indian origin. They areas much American or European as they are Indian.

The high place given to it is quite evident from its ordinal position fixed by Ranganathan. It is as the cross-roads of sciences and humanities, Ranganathan

visualised mystic and spiritual experience as the ultimate source and culmination of all types of subjects: the crown of whole knowledge. Ranganathan envisaged great potentialities in this region of knowledge.

In practical classification it is one of the simple main class. The facet formula is:

$$\Delta [P], [P_2] : [E] [2P]$$

[P] is the kind of religion, the domain of spiritual and the mystic experiences. Its isolates are mnemonically parallel to the personality isolates of Q Religion. Isolates in [P] have been enumerated, if some other subject is treated from an occult viewpoint, [P] is to be got by (SD).

[P₂] is the agency of such experiences. In the CC it is designated as the entity and its isolates have been enumerated.

[E] cum [2P]: This problem facet involves the methods, techniques and ultimate results of mystic and occult experiences. Isolates have been enumerated.

It is possible for any class of knowledge to be presented from an occult or mystic viewpoint. Only exceptions are N Fine Arts, O Literature and Q Religion. These main classes lie on the border of positivistic and mystic sciences. There is some overlapping, too. Therefore, it is not possible to represent them from mystic viewpoint. Hence class number such as (N), (O) and (Q) are inadmissible as per Rule (page 1.92-1.93) instead, the respective possible class numbers could be:

Nx (Δ)

Ox (Δ)

O, 1x (Δ)

O111, 1x (Δ) or

O: g (Δ)

All class numbers have obvious meanings.

Mystic interpretation of mountains in Zen Buddhism

Δ 46,216: 7

Voices of disembodied souls according to Hindu mystics

Δ 2, 16: 893

Clairvoyance

Δ : 835

Hallucination

Δ , 16: 5

Lakes in mystic experience

Δ , 254

Stars in Hindu astrology

Δ 2.286: 864

(Note the double borrowing here for [P₁] 286, first from [P₃] of ND Sculpture and then from [P] of B9 Astronomy). Similarly

Sun in Astrology

Δ , 283: 864
An occult study of metals
Δ (E191)
Occult Metabolism
Δ (G: 3)
Mystic manifestation of children diseases
Δ (L9C: 4): 83
Life of Joan of Arc (1412-31)
Δ .6y7I12
American Federation of Astrologers (1938)
Δ :864.73, g, 9N
Relation between clairvoyance and astrology
Δ : 835 Ot64

Self Check Exercise-6

1. Philosophy of Hindu Religion.
2. Research on good manners.
3. Symbolic logic in Brahma-Sutra philosophy.
4. Philosophy of Delhi.
5. Mountain climbing during winter.
6. Indian Journal of Hockey published by Indian Hockey Association (1976).
7. Handbook of book binding.
8. Report of Indian circus.
9. Occultism.
10. Astrology in India.
11. Future of Palmistry in developing countries.
12. Popular journal of Indian Occultism (1946).

Further Readings

1. **RANGANATHAN (S.R.)**. Colon classification. Ed. 6. Bangalore: Sarda Ranganathan Endowment for Library Science, 1960.
2. **KAULA (P.N.)**. A treatise on colon classification. New Delhi: Sterling Publishers, 1985.
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4. **SEWA SINGH** : Colon classification.: New Practical Manual. Delhi: B R Pub.2006.
5. **SATIJA (MP)** : Colon Classification : A Practical Guide: New Delhi : Satija Research Foundation in Library & Information Science 2013.

PSYCHOLOGY, EDUCATION, GEOGRAPHY

Objectives :

This chapter gives the procedures and practical exposure of three basic classes of psychology, education and geography. After reading this chapter you will be able to:

- * *Learn to construct complex and compound class numbers in the respective classes.*
- * *Learn the methodology for classifying the documents and their facet formulas*
- * *Make class numbers of the titles as given under the class*
- * *Make your answer checks from the solved answers.*

<p>S PSYCHOLOGY Facet Formula : S [P]: [E] [2P]</p>

S Psychology is a relatively simple schedule. There are no exceptional rules. Systems also occur and have been enumerated in the end. [2E] cum [3P] facet also occurs. The Facet formula is:

S (System Facet), [P] : [E] [2P] : [2E] [3P]

[P] is the individual human being. Connotations of obvious terms such as child, adolescent, etc., have been explained, though these may rarely be needed. Super Imposed Device (SID) may be required frequently.

[E] cum [2P] enlist psychological activities and processes.

[2E] cum [3P] isolates mostly pertain to psychophysics and physiological psychology. These are only for 2 and 3 in [E]. It means it is a different facet.

Cognition in a newborn baby

S11: 4

Psychology of Genius Girls

S25-6 1

Psychology of Librarians

S4 (2)

Personality of Philosophers

S4(R): 7

Personality of Logicians

S4 (R1): 7

A study of Fear among the Europeans

S75: 526

Here S7 has been subdivided by (GD).

Endurance in Rural people - a Psychological Study

S831: 793

Here S8 has been sub-divided as Y Sociology.

Gypsies brain - a psycho study

S8738: 12

Child Cerebrum - a psychological study

S1: 1221

Physiological Psychology of colour sense among toddlers

S12: 255: 3

Hindu Social Psychology

S873 (Q2)

Psycho analytical study of Mongolian People

SM9, 873(P41)

History of various Psychological Schools of Thoughts (brought upto 1975)

SAv N7

Experimental psychology of the Brain of abnormal boys

SM, 21-6: 2

Field psychology of left handed females

SN8, 55-6916

Psychometry

S: 3: 6

Statistical Psychology

S: (B28)

Educational Psychology

SobT

International Psycho-analytical Association (1908)

SM9. 1, g, 9N

Indian Psychological Abstracts (1972+)

Saxn44, N

Journal of Experimental Social Psychology (USA, 1963+)

SM, 8m73, N6

Indian Journal of Experimental Psychology (1976)

Sm44, N6

T EDUCATION

Facet Formula: T [P]: [E] [2P]

Though quite mechanical in operation, it is one of the interesting schedules. Depth classification is possible without any difficulty. There are no exceptions except the occurrence of rare [2P₂] facet. Systems also occur. The formula is:

T [P] : [E] [2P], [2P₂]

[P] is constituted of various types of educands - the level or kind of students.

[E] is constituted of educational techniques or problems. [2P] covers the subject taught - obviously to be got by (SD). A few isolates have also been enumerated.

[2P₂] enlists methods or physical medium of teaching.

T (system), [Educand] : [Problem] [Subject], [Technique]

Teaching of Algebra in Secondary Schools

T2: 3(B2)

Teaching of Algebra in Secondary Schools by Audiovisual method

T2: 3 (B2), 1

Curriculum in Punjabi Literature for honours students

T43: 2(0153)

Home Science Curriculum for female college students

T42-55: 2(MA)

Ability test for scientific research by viva voce

T48: 5(A), 7

Home work in Colon Classification to Post Graduate Students

T45: 4(2: 51N3), 1

Headmaster of Kindergarten Elementary School

TL8, 15: 87

(Here as per instructions 8[E] has been sub-divided as X: 8)

Headmistress of the Holy Heart Kindergarten Elementary School, Amritsar

TL8, 15.4443.A, d, H, 1

Executive Council of a University

T4: 82

Financial administration in Indian Universities

T4: 8D.44

Wardha Secondary School Hostels

TN3, 2: 72

Merrill-Palmer Intelligence Test

T: 5,1N31

Teaching Hindu Religion to the Hindus

- T9 (Q2) : 3(Q2)
Difference between the curriculum of male and female students
T510w5: 2
Influence of curriculum on teaching techniques
T: 30r2
Teaching of Linguistics
T: 3(P)
Teaching of mother-tongue by visual methods to illiterates
T38: 3(P1), 15
Examining vocational students in foreign languages
T9 (Y4): 5 (P5), 5
Forum of Education, (Australia, 1941+)
Tm8, N4
Educational Herald (Indian, 1964+)
Tm44, N6
Times Educational Supplement (U.K. 1910+)
Tm56, N1
Report of the Education Commission (1957)
T.44'N57t
Research in Education in India
T: f.44
National Council of Educational Research and Training (NCERT) (1961)
T.44, f, 9N6
Montessori International Association (1925)
TN1. 1, g, 9N2
Association of Commonwealth Universities
T4. 1N48, g, 9N4
International Association of University Professors and Lectures (France, 1944)
T4, b.1, g, 9N4
National Institute of Basic Education (New Delhi, 1956+)
TN3.44, d, 9N5
All India Seminar on Teaching of Indian History (1970)
T: 3(V44) p44, N70
Conference of Punjab College Teachers (1995)
T42, bp4443. N95
Report of the University Education Commission (1948-1949: Chairman, S.
Radhakrishnan)
T4.44 'N48t5

U GEOGRAPHY
Facet Formula: U [P]. [S] 'T]

Geography is an ever-expanding subject, which encompasses under its umbrella many seemingly varied topics. Its boundaries cross and criss-cross with economics, sociology, civilization and culture, commerce, geography, geology and many more. Ranganathan truly says that it is an elusive subject, which is ancient and modern, both. It is a bridge between the human society and the world of nature. Therefore, it is very difficult to define its scope, except by enumeration.

The first division of U Geography is on canonical lines. But strangely enough such a rich and varied subject has been sparsely enumerated. Only [P] has been given. There is no [E] even, not to speak of [M] and other levels of [P]. Of course [S] and [T] may be used often, which are to be taken from their respective schedules. Ranganathan advises that in case of U6 Economic Geography and U8 Travels [T] should be the Latest Effective Decade (LED) covered:

Rainfall in India in the summer of 1982

U2855.44 'N82'n3

Rainfall in Indian mountains in the winter of 1981

U2855.44.g7 'N81' n7

Physical Geography of the Himalays

U2.4.g7H

Wind velocity in Gangetic valley in the nights of 1981

U2831.44.g1G 'N81'd

Human Geography of the Bengal Forests

U47.4462.f

Railway Routes in the Nile Valley

U6415.6.g1N

Voyages in the Indian Ocean brought upto 1995

U8.95 'N9

Maps of Indian Industrial Resources (1947)

U672.44fN5

A Textbook of Economic Geography of India

U6.44

Human Migration in Snow Times

U42 'p8

Air Routes in India in 2005

U6435.44 'P05

Political map of India brought upto 1970s

U5.44.fN7

How Nature makes seasons

U16

Mathematical equation of atmospheric temperature and pressure

U2820t4: (B)

Weather forecasting for Agriculture

U2891 ob J

Geopolitics of Punjab

WOgU.4443

Life of William Dampier (1651-1715)

U8wK51

Journal of the Geographical Society of India

Um44, N3

Geographical Magazine (UK, 1935+)

Um56, N3

Royal Geographical Society (1843)

U.56, g, 9M

President of the Geographical Society of India (1933)

U.44, g, 9N3, 1

Indian Association of Mathematical Geography (1970)

U1.44, g, 9N

National Atlas Organization, Calcutta (1956)

U11.44, d, 9N5

Punjab Tourism Corporation

U8.4443, k, 9N

Fodor's Guide to India

U8.44n56, N

Self Check Exercise-7

1. Psychology of female child of rice producing countries.
2. Research on the memory of the children in the European countries.
3. Psycho-analysis of the drug habit of criminals.
4. A study of the emotions of the old people according to behaviorism.
5. A report on the rural education in India after independence.
6. All India education conference on 'Management of rural schools in India' held at Central Institute of Education, University of Delhi, Delhi (2004).
7. Curriculum of astronomy for basic elementary school.
8. Audio-visual method of teaching library classification in university system.
9. Indian encyclopaedia of political geography (1978).
10. Weather forecasting for rice farming in Himalayas regions.

11. Colours of the seasons in India during winter.
12. Trade route in Pakistan.

Further Readings

1. **RANGANATHAN (S.R.)**. Colon classification. Ed. 6. Bangalore: Sarda Ranganathan Endowment for Library Science, 1960.
2. **KAULA (P.N.)**. A treatise on colon classification. New Delhi: Sterling Publishers, 1985.
3. **SATIJA (M.P.)**. Manual for practical colon classification. Rev Ed.3. New Delhi: Sterling Publishers, 1995.
4. **SEWA SINGH** : Colon classification.: New Practical Manual. Delhi: B R Pub.2006.
5. **SATIJA (MP)** : Colon Classification : A Practical Guide: New Delhi : Satija Research Foundation in Library & Information Science 2013.

GENERALIA, LITERATURE AND LAW

Objectives :

This chapter gives the procedures and practical exposure of three basic classes of generalia, literature and law. It is to note that these three classes in the colon classification have a special treatment of ***personality facet upto the four levels means no matter, energy, space and time.*** It is also interesting to note that in these class only personality facet occurs. Therefore, on the basis of this characteristic generalia, literature and law are put together. After reading this chapter you will be able to:

- * *Learn to construct complex and compound class numbers in the respective classes.*
- * *Learn the methodology for classifying the documents and their facet formulas*
- * *Make class numbers of the titles as given under the class*
- * *Make your answer checks from the solved answers.*

<p>GENERALIA BIBLIOGRAPHY Facet Formula : a [P], [P2] [P3], [P4]</p>
--

z GENERALIA

When every subject is assignable to one and only one main class, then there should be no subject as a truly generalia class. In fact there is no generalia subject; only there are generalia documents - which hold together bits of knowledge from various disparately varied subjects. Generalia class is not mutually exclusive sub-division of knowledge but an adjunct of book classification necessitated by the need of readers. Every subject is so equally present that it is difficult or unjustified to class the document in any of the subject. For example, let us take a daily newspaper, it contains news on large panorama of subjects - social, political, economical, entertainment, criminal, law, legislature and so on. For such documents, Ranganathan has created a generalia main class z. It contains documents such as universal encyclopedias, general periodicals, and generalia bibliography. Apart from these, books on area studies, such as Indology, Sinology, Asiana and multifaceted persons such as Gandhiana, Nehruana, also fall in this class.

The bare digit z may be amplified by (ACI), (AD) and (GD). There is a very queer rule that whenever the bare digit z is amplified by an (ACI) digit, then the digit z should be omitted and the class number should begin with the (ACI) digit only. (Rule 9z4 page 1.62).

Thus a general encyclopaedia will get the class number k, (not zk). General Bibliography will get the class number a (not za); and similiary a general periodical will get the class number m (not zm). The (ACI)s may, of course, be further fitted with their own

facets - the facets [P₁] and [P₂] of the (ACI).

Encyclopaedia Britannica
k56, L
Encyclopedia Americana
k73, M
The Hindu: An Indian newspaper
m44, M80
Illustrated Weekly of India
m44, M81
Encyclopaedia of World Bibliography
wk1, N73

In case of a person coming as a class, z may be amplified by (AD) - the name of the person:

zG	Gandhiana
zN	Nehruana
zP	Platoana

Here z is not to be omitted. Designating a person as a class helps to bring together all his works belonging to different subjects.

Bibliography on Nehru brought upto 1970s

zNaN7

Life of Nehru

zNw

Gandhian Institute

zG.44. d, 9N36

Journal of Gandhian Studies, 1973+

zGm44, N7

For area studies z may be amplified by (GD).

z44	Indology
z4	Orientalogy
z41	Sinology

Which may be further amplified.

Indian Journal of American Studies

z73m44, N

Vishweshvara Vishva Bandhu Institute of Sanskrit and Indological Studies
(Hoshiarpur, Punjab)

z44.4443.H, d,V

The schedule of z generalia class with enumerated isolates is "a Generalia Bibliography" and its facet formula is:

a[P₁], [P₂] [P₃], [P₄]

[P₁]: It stands for the kind of bibliography - other than textual contents. It includes the material to be included in the bibliography or catalogue. Its isolates have been enumerated. It would be observed in the practical work that a complete isolate will have to be frequently got by the (SID). Too much application of (SID) makes one feel that there is some snag in the coverage of [P₁] isolates.

[P₂] : means the issuing authority, viz., whether a bookseller or a publisher.

[P₃] : is to be got by (CD) or (AD) depending upto [P₂].

[P₄] : also depends upon [P₂] and is got by (CD), if required.

The variation chart for [P₃] and [P₄] has been given at page 1.63 of the colon classification-6 (1963). One has to constantly refer to this chart.

Catalogue of the books of the Manager of Publications (Delhi)

a43-55, 3M

M is here [P₃] and has to be got by (AD), if (IN) in [P₂] is 3 or 4. In our case it is 3.

Similarly, Autumn 1981 catalogue of Periodicals from the Pergamon Press

a46-58, 3P'N81 'n7

Union catalogue of Periodicals in India in 1979

a46, 144, N7

A catalogue of the Exhibition of India's Nineteenth century Manuscripts

a12, 544, M

Reading List of Children Books

a811, 7

Bibliography of Russian Books translated into Punjabi

a95142-153

95 has first been divided by the original language i.e. 142 Russian, then by the other language. A hyphen separates the two.

Indian Book Review

a43, 144 : gm44, N81

Bibliography of Bibliographies

aa

Biography Index (US, 1946+)

a43, 144n44, N5

O LITERATURE

Facet Formula: O [P₁], [P₂] [P₃], [P₄]

It is one of the peculiar but simple main classes. Here only personality category exists, all other categories are absent. Personality occurs in four levels - helping to individualize specifically every literary work. Therefore, this schedule works with care and simplicity in assigning co-extensive class numbers to the works of creative literature. On the other hand, it seems hopelessly inadequate in case of critical literature. Literary forms

have been enumerated primitively broad. Species or genre of literature has not been enumerated, nor they can be improvised by (SD). Ranganathan tenders his own arguments in self-defence - meaning that the omissions have been knowingly made (Rule 02 pp 1.98-1.99). Notwithstanding Ranganathan's own defence, the CC has incurred a big disadvantage by not dividing the Form facet further into species.

The CC arranges literature first by language, followed consecutively by the divisions of form, author and work. Each division is designed by a level of personality in the above order.

[P₁] stands for the language of the literature. Its isolates are to be taken from the common schedule of languages given at page 2.26.

[P₂] stands for the form of literature viz., Drama, Poetry or Fiction. Isolates have been enumerated in the schedule at page 2.94.

[P₃] stands for the author facet to be got by (CD). In case of an individual author (CD) is to be got by the exact year of birth of the autor. In case of anthologies (CD) is worked to the (LED) covered by the year of birth of the youngest author.

[P₄] stands for the individual named work of a given author. It may be got by Group Notation or by (AD).

Method of applying group notation deserves an explanation:

- (1) If the number of works of an author is upto eight, then these may be arranged in the sequence they are published - viz., 1, 2, 3, upto 8.
- (2) In case the number of works of an author is upto 64, then these works are arranged in eight groups as follows :

GROUP NO.	ITEM NO.							
	1	2	3	4	5	6	7	8
1	1	2	3	4	5	6	7	8
2	9	10	11	12	13	14	15	16
3	17	18	19	20	21	22	23	24
4	25	26	27	28	29	30	31	32
5	33	34	35	36	37	38	39	40
6	41	42	43	44	45	46	47	48
7	49	50	51	52	53	54	55	56
8	57	58	59	60	61	62	63	64

From the above table each work is denoted by at least two digits. First digit stands for the group and the second for the item number in that group. Thus the first work is denoted as 11 meaning the first work of the first group. The 25th work is given the work number 41, meaning the first work of the fourth group. Similarly, the 17th work is denoted as 31: the 31st as 47; and 64th work as 88. In the following case work number [P4] has been got by AD

Shakespear's Hamlet

O111, 2J54, H

Tess of the d' Ubervilles by Thomas Hardy

O111, 3M62, T

Chitta Lahu a novel by Nanak Singh

O153, 3M97, C

Milton's Paradise Lost

O111, 1K08, P

In case a critical work or an evaluation of an author, the ultimate number should be sharpened by adding ".g":

Guy de Maupassant - an evaluation (French story writer born in 1850)

O122, 3M50: g

A critical evaluation of Shakespear's Hamlet

O111, 2J64, H : g

Prem Chand's Godan : An Appraisal

O152, 3M80, G : g

"g" may further be sharpened by (SD) if the evaluation is from some particular viewpoint:

Psychology of Hamlet

O111, 2J64, H : g(S)

Robert Browning's Men and Women, as Love Poetry

O111, 1M12, M : g (S: 55)

A Psychological of Shakespear's Women Character

O111, 2J64: g (S55)

John Donne as a Metaphysical Poet

O111, 1J72: g(R3)

In the above two examples it may be noted that no work facet is involved, hence [P₄] is absent. Similarly,

John Keats as a poet of Aesthetics

O111. 1L92: g (RS)

Pope's Rape of the Lock, as a Mirror of contemporary Society

O111, 1K88, R : g(Y)

Collected poems of Thomas Hardy

O111, 1M62x

Collected works of Thomas Hardy

(He was both a novelist and a poet)

O111xM62

(Position of x may be noted in the above two cases)

In case of anthologies or collected biographies, the (CD) is to be worked upto the

(LED) covered by the year of birth of the youngest author:

Anthology of Punjabi poems, Youngest author born in 1947

O153, 1xN5

Lyrical Ballads by William Wordsworth (1770-1850)

and T.S. Coleridge (1772-1834)

O111, 1xL7

Biography of Shakespeare

O111, 2J64w

Collected biographies of Wordsworth (1770-1850),

Coleridge (1772-1834), Welter Scott (1711-1832) and Byron (1788-1824)

O111, 1wL9

Byron is the youngest. But if the collection or biographies are from some subject viewpoint then w or x may be sharpened by (SD) and then by (CD). (Rule 09wn page 1.103).

Collection of religious poems in Hindi

(Youngest author born in 1893)

O152, 1x(Q)M9

Collection of Punjabi love poems

(Youngest author born in 1942)

O153, 1x(S : 55)N5

Mystical writings of DH Lawrence

O111, 3M75x()

Biographies of the love poets of the world

(Youngest born in 1933)

O, 1w(S : 55)N3

Oxford dictionary of English quotations

O111xk

Dictionary of Political sayings

O111x(W)k

Dictionary of moral maxims from Sanskrit Poetry

O15, 1x(R4)k

A title index of Shakespear's poems

O111, 1J64d

An index of the first lines of poems by Alfred Tennyson

O111, 1M09e (Rule 09 page 1.102)

History of English Literature upto 1995

O111v 'N9

British Journal of 19th century English Literature

O111, Mm56, N

Indian Journal of English Literature (1931)

O111m44, N7
 Sahitya Akademi
 O.44, g, 9N
 Amritsar Literary Society
 O.4443.A, g, A
 Walt Whitman Review (USA, 1954+)
 O111A, 1M12m73, N5
 (For American English O111 has been sharpened by AD).
 Cambridge Bibliography of English Literature upto 1920
 O111aN3
 Hamlet : a critical anthology (youngest critic born in 1949)
 O111, 2J64, H : gx N5
 An evaluation of Benedetto Croce (1866-1952)'s criticism of Shakespeare
 O111, 2J64:gx M66

Z LAW

Facet Formula: Z [P], [P2], [P3], [P4]

Law of a particular subject such as library legislation, public health law, law of passports, according to the CC, are classed with their respective subjects. Here personality occurs in four levels.

It may be noted that here comma is present between [P₂] and [P₃] while usually it is absent.

[P] is the community over which a given law has the jurisdiction. It is got by (GD) in case of a nation, and by (SD) in case of a cultural community. *But it should be noted carefully that [P] stands for community and not the subject.*

[P₂] and [P₃] have been termed as Law I and Law II respectively. In case of [P₂] A War Law, all the earlier isolates of [P₂] are applicable after Z, A and its subdivision, viz., Z, B, and Z, C and Z.

[P₃] isolates vary according to [P₂]. Therefore there is no general schedule of [P₃] isolates. Similarly [P₄] isolates are only applicable to Z, 7, 7.

[E] cum [2P] cover the problems of Z, 98 Legal Documents.

Indian Law

Z44

Muslim Law

Z(Q7)

International Law

Z1

International Law of Japan

Z42

International Law of Libels

Z1, 572

International Law of War

Z1, A

International War Law of Arms

Z1, A264

Succession in US copyright Law

Z73, 2674, 6

Punjab Law of Local Bodies Jurisdiction

Z4443, 186, 1

Divorce Law

Z, 835

Punjab land Ceiling Act, 1972

Z4443, 211, 14 'N72

Hindu Law of Oral Contract

Z (Q2), 3,21

Hindu Succession Act, 1956

Z (Q2), 2, 6 'N56

[P₂] 4,5,6,91,92,93 and 95 have no [P₃]; only Z, 94 and its subdivisions have [P₄] isolates).

Ex parte summary trials in Pakistan Law

Z44Q7, 51,73

Indian Law of session case award partition

Z44, 755, 75, 2

Registrar of the High Court of J&K

Z4447, 83, 81

Weightage given to the direct evidence

Z, 9414, 3

Drafting of negotiable instruments

Z, 985: 1

Indian Law of cancellation of deeds

Z44, 981: 5

Sacred sources of Jewish Law

Z (Q5), 921

Civil procedures in summary trials

Z, 751, 11

Indian law of pre-emption of property

Z44, 2, 195

To repeat again if [P] is A, B, C or D, War Law, then all the earlier sub-divisions of

[P₂] are applicable after A, B, C and D. In such cases [P] isolates have their own separate [P₂] isolates - applicable to War Law. It is yet another case of differential facets.

Law of War prisoners

Z1, A, 6

Evidence in War Law

Z, A94

Law of summary trials in land war

Z, B751

International Law of declaration on Sea War

Z1, C, 1

US War Law of mines

Z73, A2113, 31

Summary trials of War prisoners

Z, A751, 6

A comparative study of Indian and British Property ownership laws

Z44Om56, 2, 1

Difference between slavery and forced labour according to Indian Law

Z44, 512620w3

Difference between immovable and movable property according to law of sea war

Z, C210n6

Indian Law for abetment of war crimes

Z44, 5ZA04

British Law for abetment in crimes against religion

Z56, 5Q04

All India Conference on International Law, 1978

Z1p44, N78

Journal of Indian Law Institute (1958+)

Zm44, N5

A periodical report law cases should be fitted with two (ACI)s in succession namely "y7m".

Summary of Recent Decisions relating to Law of Real Property (USA, 1936+)

Z73, 2y7mN3 or Z73, Zy7m73, N3

Indian Law Reporter (1967+)

Z44ymN6 or Z44y7m44, N6

In the above two examples [P] of the (ACI) digit m may be avoided if desired as it has already been represented in the class numbers.

Supreme Court Weekly Reporter (1963)

Z44, 81y7mN6 or Z44, 81y7m44, NG

Indian Institute of International Law (1964)

Z1.44, d, 9N6

Indian Law Institute (1956)

Z.44, d, 9N5

President of the Supreme Court Bar Association of India

Z44, 81, 5, g, 9N, 1

Self Check Exercise-8

1. Union catalogue of manuscripts in District Libraries of Delhi.
2. Oxford catalogue of reference books.
3. Oxford catalogue of rice reference books.
4. British National Bibliography (1968).
5. Gaudan : A novel written by Munshi Premchand (born in 1888 and this is his 6th work).
6. Criticism of Hamlet
7. Psychology of Gaudan.
8. General History of Hindi poetry.
9. American Law of landed property.
10. Delhi Land Ceiling Act
11. Muslim Succession Act
12. Delhi High Court Digest

Further Readings

1. **RANGANATHAN (S.R.)**. Colon classification. Ed. 6. Bangalore: Sarda Ranganathan Endowment for Library Science, 1960.
2. **KAULA (P.N.)**. A treatise on colon classification. New Delhi: Sterling Publishers, 1985.
3. **SATIJA (M.P.)**. Manual for practical colon classification. Rev Ed.3. New Delhi: Sterling Publishers, 1995.
4. **SEWA SINGH** : Colon classification.: New Practical Manual. Delhi: B R Pub.2006.
5. **SATIJA (MP)** : Colon Classification : A Practical Guide: New Delhi : Satija Research Foundation in Library & Information Science 2013.

HISTORY, POLITICAL SCIENCE AND ECONOMICS

Objectives :

This chapter gives the procedures and practical exposure of three basic classes of history, political science and economics. After reading this chapter you will be able to:

- * *Learn to construct complex and compound class numbers in the respective classes.*
- * *Learn the methodology for classifying the documents and their facet formulas*
- * *Make class numbers of the titles as given under the class*
- * *Make your answer checks from the solved answers.*

V HISTORY

Facet Formula : V [P1], [P2]: [E] [2P] ' [T]

In the CC, V History is rather an interesting main class, wherein categories impersonate and many devices are called into full play. But a confusion has been created by intermingling of the isolates of V History and W Political Science. In some cases, especially the constitutional aspects of a country, it requires a meticulous mind to distinguish between the two main classes. Ranganathan has explained the difference in Sec. V32 (pages 1.115-1.116) of the Rules. It is useful for the classifier. A theoretical aspect of constitution or a similar subject should go into W Political Science and an historical account into V History.

As is obvious [T] may often be required and its focus should be as sharp as the exact year. Two different points in time (span) may be connected by any of the two arrows, viz., backward arrow or forward arrow, usually it is the backward arrow.

[P] is the community as distinguished from the geographical area. Its focus is to be got by (GD). *It means that the space isolates officiate as personality isolates.*

It may be noticed that the [P] may further be sharpened by (SID) for constructing the isolate number of the colonies of one imperialist country in other parts of the world. [P] can further be amplified by (SD) whenever necessary. Near sovereign states are got by (CD).

[P₂] is the organ of the government.

[E] cum [2P] cover the activities, functions and policies of the government.

History of India

V44

114

History of Punjab

V4443

India from 1857 to 1947

V44'N47<—M57

or

V44'M57—>N47

(Use any arrow but make sure that the time flows from lower to the higher point).

Greek History in 500 BC

V51 'C499

History of British India

V44-56

History of French Empire in Africa

V6-53

British colonies in the world in 19th century

V1-56 'M

History of Hindi speaking states in India

V44(P152)

History of Feudal Europe brought upto 15th century

V5(W3)I

History of the Christian people of the world upto the Middle Ages

V1(Q6) 'G

Powers of the English Monarch in Feudal England

V56(W3), 1 : 3

Functions of Judiciary in European Communist Countries

V5 (W691), 7 : 3

History of Princely states of Punjab brought upto 1947

V4436 (W4) 'N5

Freedom of education in Catholic countries brought upto 1960s

V1 (Q62): 58(T) 'N7

Functions of Prime Minister of India brought upto 1990s

V2, 21: 3 'N9

Structure of Indian Legislature brought upto 1960s

V2, 3 : 2 'N7

Specific political parties may be got by (CD):

Indian National Congress

V44, 4M89

Janta Party

V44, 4N77

Bhartiya Janta Party

V44, 4N80

History of the functions of civil administration brought upto 2005

V2, 8: 3 'P05

Constitutional Law of India - A historical account

V2: 2 (Z)

A historical account of Home Policy in British India brought upto 1947

V2-56: 11'N5

Functions of the Viceroy General of British India

V2-56, 11 :3

V : 19 Foreign Policy presents another interesting case. It has been endowed with the status of a main class by fitting it with its own facet formula (Rule V319 page 24 of the Annexure).

V: 19 [P], [P₂]

[P] is the community to which the foreign policy is directed : to be got by (GD).

[P₂] is the subject of the foreign policy to be got by (SD).

Here [P₁] and [P₂] are telescoped, so if [P₁] is absent there is no need to put comma before [P₂].

And no confusion or cluttering of facets can arise from such a rule, since [P₂] is always got by (SD) and is thus recognizable.

History of cold war between USA and USSR brought upto 1990's.

V73: 1947, (zE) 'N9

India's commercial policy towards C'wealth countries

V2: 191N48, (X: 54)

Diplomatic relations between the Jews and Muslims brought upto 2005

V1 (Q7): 191 (Q5), (zB) 'P05

US armament policy towards Pakistan

V73: 1944Q7, (zS)

Cultural Relations between Russia and India

V2: 1947, (Y: 1)

India's foreign economic policy

V2: 19(X)

US armament policy

V73: 19(zS)

Note that in the above two cases [P₁] is absent, and [P₂] has been attached directly.

In case of tables of political persons, the appropriate class number should be followed by s, which is further sharpened by (CD) covering the (LED).

Tables of US President brought upto 1980

V73, 1sN9

Tables of English monarchs brought upto 1952

V56, 1sN5

In case of biography of a politician or a statesman, the digit pair y7 is to be added to the community facet.

Life of Mahatama Gandhi

V2y7M69

Biography of Napoleon

V53 y7L69

Philosophy of History

V: (R)

Influence of library science on archaeology

V: 710g2

A comparative study of the powers of the President and Prime Minister of Indian Republic brought upto 2000s

V44. 10m21: 3 'P

All India Conference on Punjab History 2002

V4436 p44, P02

Indo-African Trade Journal (India 1965+)

V44: 196, (X: 5) m44, N6

National Archives (India)

V44, 8.d, 9M

Report of the Indian Institute of Historical Studies

V.44, d, 9N3r

Indian Council of Historical Research (1972)

V.44, f, 9N7

Canadian Historical Association (1974)

V.72, g, 9N7

Issue of Pakistan in Indo-US Foreign relations

V44: 1973, (V44Q7)

W POLITICAL SCIENCE

Facet Formula: W [P1], [P2]: [E] [2P]

To those who have learned the intricacies of V History, the W Political Science schedule presents itself as an easy case. But the difficulty of choosing between V History and W Political Science may still persist. It may be stated again that subjects treated purely from theory viewpoint are to be put in W Political Science.

[P] is the kind of state.

[P₂] is the organ of the state; its isolates are the same as the [P₂] of V History.

[E] cum [2P] cover activities, politics, and functions of the state. Again the isolates

are the same as those of V History.

Theory of International Relations

W: 19

Powers of monarchs in limited monarchies

W46, 1: 3

What is *laissez faire*

W: 33

Freedom of Press in India

W: 58(4). 44

(Here (E) 58 has been sharpened by (SD). 4 is Journalism see page 2.4)

History of Election systems of Europe brought upto 1970s

W : 91v5 'N7

Civic duties in dictatorship

W64: 5

Geopolitics

W0gU

Political Sociology

Y0gW

Liberty by J.S. Mill

W : 511

Functions of Legislature in world state

W95, 3 : 3

Communitistic Laissez-faire

W691 : 33

Democratic monarchy

W40k6

Difference between representative democracy and direct democracy

W610w2

Indian Journal of Political Science (1940)

Wm44, N4

Raj Vidya (1964+)

Wm44, NG

Journal of International Politics, USA

W: 19m73, N

Indian Association of Political Science

W.44, g, 9N

X ECONOMICS

Facet Formula: X [P1]; [M]: [E] [2P]

In the CC, X Economics includes transport, commerce, international trade, industries, production, consumption, office and personnel management. Systems and Specials also occur which have been listed at the end, as usual.

[P] is the business

[M] is the medium of currency. It is applicable only to XG 1 Money.

[E] cum [2P] covers the economic problems and activities.

It may be noticed that some isolates such as Transport. Commerce, etc., occur both in [P] and [E]. In such a case, in [P] should be put the business aspect, while in [E] should be put the method, techniques and other such problems.

In case of Industrial Economics X8 [P]8 should be further sharpened by (SD) for any specific industry.

Standard of Living in India

X: 16.44

Value of Gold Currency in Japan

X61; 1: 7.42

X62 and X72 have their own respective special energy isolates, given at the end of the general energy isolates of X, at page 2.114, column second.

Rate of interest in commercial banks

X625: 11

Progressive property taxation

X722: 13

Equal taxation system in India

X72: 11.44

Paper export

X8 (M13): 545

Marketing of published material

X8 (M16): 51

Demand and Supply Theory

X: 73

Any specific theory of Demand and Supply may be got by (CD) - treating it a system.

Say's Law of Demand and Supply

X: 73M

Various theories of demand

X : 731A

Office Management

X : 8M

Indian Law for advertising tobacco products

X8(J452) : 513 : (Z44)

Wages in publishing industry

X8(M16) : 93

Wages in small scale publishing concerns

X9B, 8(M16) : 93

Wages in small-scale publishing concerns in cooperative economy

XM, 9B, 8(M16): 93

Trade Unions in large-scale textile mills in technocracy

XN19, 8(M7) : 97D, 9D

Eccentricity of X Economics schedules lies in dividing X: 9 Personnel Management into what Ranganathan calls, three sectors categorized as follows:

- 1) X: 9 to X: 9915 (least concrete sector of 9)
- 2) X: 99A to X: 99W (More concrete sector of 9)
- 3) X: 9A to X: 9Q (Still more concrete sector of 9)

If a subject is such that its isolates lie in more than one sector, then the latter sector should form the earlier level and the common digits are not to be repeated in the latter levels; the levels are to be separated by a comma.

Wages in Cycle Industry

X8 (D5125): 93

Female workers in cycle industry

X8 (D5125) : 9F

Wages of female workers in cycle industry

X8 (D5125) : 9F,3

Since in the above example X : 9F Female workers lies in the still more sector, while wages X : 93 lies in the least concrete sector of 9, so X : 9F forms the earlier level. And since the digit 9 is common to both the sectors, so it is not to be repeated in the latter level.

Wages of female workers in Public sector cycle industry in socialist economy

XM2, 9W, 8(D5125) : 9F,3

Working hours of seasonal unskilled labour in tea plantations

X8 (J451) : 9G5, 9C, 55

Wages of agricultural semi skilled war refugees

X8, 8(J): 9J4, 9D, 3

Social security for clerical female workers in a public enterprise

X9W: 9F, 9P, 58

Job evaluation of part-time research workers in dye and paint industry

X8 (F58): 9G4, 9R, 1

Similarly, X : 97 Industrial Relations has been divided into three sectors. Therefore, a subject of industrial relations which covers more than one sector o X: 97, the latter sector should form the earlier level.

Settlement in strike by trade unions

X : 97D, 9D, 8

Moral maintenance in lock-out in textile industry

X8 (M7) : 979W, 1

Arbitration in the industrial dispute of coal miners

X8(F551) : 979C, 6

Settlement in the strike by medical staff

X8(L) : 979D, 8

Settlement in the strike of married female workers

X : 9F5, 79D,8

(In the above case the levels 1 and 2 have the digit 9 in common, while in levels 2 and 3, the digits 97 are common. Common digits have not been repeated).

Settlement in the strike of supervisory seasonal staff of a forest in Communistic economy.

XN, 8(JB) : 9G5, 9G, 79D, 8

(It is a mixed case: the first two levels belong to X : 9 while the last two levels belong to X : 97. But all the three sectors of X: 97 fall in the least concrete sector of X : 9).

Computer industry in India

XB(D65, 8(B)).44

Import of mechanical translation equipment in India

X8(D6, 8(P : 795)) : 546.44

Trade relations between India and USA

X : 5.440j73

(Intra-Facet general relation)

India's preference in marketing agricultural produce towards Africa

X8(J) : 51,440k6

Pakistan's preference in exporting wheat towards Muslim countries

X8(J382) : 545.4470k 1(Q7)

Influence of banking in public finance in a Communistic economy

XN,7 or 6

Difference between accountancy and audits

X : 8 HOWJ

(It is a case of Intra-array Difference phase Relation)

(The phase relation symbol w will indicate that here J is a part of 8, instead of being a Main class agriculture).

Indian Journal of Agricultural Economy (1950+)

X8(J)m44, N5

Journal of Mathematical Economics, (1924+), (Netherlands)

X : (B)m5962, N7

- History of Political Economy (USA, 1973+) : A Journal
Xvm73, N7
- Statistical Abstract (India) (Annual)
X8(A) : 2.44sN
- A survey for Cosmetics Market in India
X8(F95) :51: u
- Advertising profession in India
X : 513.44, b
- Indian Railways
X415.44, w, 9M
- Indian Society for Agricultural Economists (1939)
X8(J).44,g,9N3
- International Labour Organization (1919)
X : 9.1, w, 9N19
- (It has been treated as a government department)
- Indian Bureau of Weights and Measure (1946)
X : 5e.44, w, 9N46
- For weights and measure, the class number is
X : 5e (Rule X : 9e page 1.119)
- Indian Institute of Management (Calcutta)
X : 8.44.C, e4, I
- (It has been treated as a local Institution)
- Indian Institute of Economic Growth
X.44, e4, 9N5
- Indian Institute of Chartered Accountants (1949)
X: 8F.44, d, 9N49
- Golden Arrow Transporters, Amritsar
X411.4443.A, k, G
- Indian Economic Association (1918)
X.44, g, 9NI8
- Great European Economists (youngest born in 1882)
Xw5, M9
- Ten great economists (youngest born in 1905)
XwN1
- Life of Lord Keynes (1883-1946)
XwM83
- Bibliography of Agricultural Labour in India (1975)
X8 (J): 9aN7

Bureau of Indian Standards (1947)

X: 5e.44,d, 9N4

Self Check Exercise-9

1. A history of the Parliament of India.
2. Britain's agricultural economic policy towards India.
3. Biography of Pandit Jawaharlal Nehru (Born in 1889).
4. Functions of the BJP during 2004.
5. Theory and practice of Indian democracy.
6. Geopolitics.
7. Problems of the freedom of Press in Muslim countries.
8. A national seminar on 'Foreign Policy between India and European countries' held in Vigyan Bhawan, New Delhi from 23-25 December 2004.
9. A study of the rate of interest in the Commercial Bank of India.
10. Rice small scale industries in Punjab.
11. Settlement of strikes by trade unions in textile industry.
12. Arbitration in strikes of unskilled labour in the paper industries in Kerala.

Further Readings

1. **RANGANATHAN (S.R.)**. Colon classification. Ed. 6. Bangalore: Sarda Ranganathan Endowment for Library Science, 1960.
2. **KAULA (P.N.)**. A treatise on colon classification. New Delhi: Sterling Publishers, 1985.
3. **SATIJA (M.P.)**. Manual for practical colon classification. Rev Ed.3. New Delhi: Sterling Publishers, 1995.
4. **SEWA SINGH** : Colon classification.: New Practical Manual. Delhi: B R Pub.2006.
5. **SATIJA (MP)** : Colon Classification : A Practical Guide: New Delhi : Satija Research Foundation in Library & Information Science 2013.

ANSWER TO SELF CHECK EXERCISES**Exercise-1**

1. 236: 97.4
2. 24(X81); 43:55.4481 'N98
3. 2m44, N76
4. 2.4481, D, g, 1:3
5. B633: 91
6. Bm73, N46
7. B.44, g, 9N67r
8. Bav
9. C.44, f3, 9N52, 1:3 'P03
10. C54: 22
11. CN2, 5: 33
12. C9B38: 58
13. E: 2
14. E9G, 92: 3
15. E: 24p44, P03
16. E9G: f3
17. D65,8(MC461): 5.5611
18. D66, 21: 7
19. D85: (G)
20. D65, 450gY12-23.1 (Y: 41)

Exercise-2

1. F: 6
2. F558: (P111: 4) k 152
3. F191: 6m73, N63
4. F53.44, f, 9N5 4
5. G9555: 11.44
6. G: 61p1, P04
7. G: 12.53
8. G2xMo9
9. H4132.42: g
10. H0bD
11. H22: 155. 6
12. H7182: 16. 4474
13. HZ .44: (Z)
14. HZ172.44
15. HZ.44, f, 9N56: 3
16. HZ.73, g, 9N52, 1: 97

Exercise-3

1. L76: 411:627
2. LM: 4632.1 (J381)
3. LB, 9E-9V, 185:4:6
4. L.44, f, 9N52: 2
5. J381.4492.9B 'n7
6. J382: 5.441.e5G
7. J9S: 4:6.4445.g7
8. J.44rN60
9. KZ351: 421:5
10. KZ445: 423:7
11. KZ311: 71:84
12. KZ311: 71.44.M
13. Y310ye: 1.1(Y: 41) 'P
14. Y73 (Q2): 3411
15. Y: 47:2.595 'N8
16. Y73 (P1): 1:7

Exercise-4

1. IwxM17
2. I5, 15:3.6.d
3. I, 14m44,N78
4. I: 8.44,d, 9N68, 1:3
5. K96: 58.44
6. K86.1 (J)
7. K: 3.44m44,N88
8. K: 5t
9. KZ8n44, N64
10. LZ: (P: 4) k
11. LZ44, 2
12. LZk56, N76

Exercise-5

1. NA73, 8(M7)
2. NA4481, N8 (T15), 41:8
3. NB44Q7, N1, 691:3
4. ND, 9(Q)
5. NW44m44, N62
6. NQ4475, NxM
7. P152, J: 4k 111N6
8. P (6) 111
9. P111m44, N89
10. P152, C3: 291
11. Q2: 336
12. Q7 : 21
13. Q8441: 6
14. Q7: 21: (P111: 4) k 152

Exercise-6

1. S1-55.1 (J381)
2. S1: 43:b2.5
3. SM9, 65: 796
4. SN1, 38: 5
5. T9 (Y31) .44 'N47r
6. T9 (Y31): 8.44p44,P04
7. TN3, 15: 2 (B9)
8. T4: 3 (2:51), 1
9. U5.44k44, N78
10. U2891 obJ381.g7H
11. U16.44 'n7
12. U641.44Q7

Exercise-7

1. a12, 24481
2. a47, 3 O
3. J381a47, 3 O
4. a43, 153n53, N68
5. O152, 3M88, 6
6. O111, 2J64:g
7. O152, 3M88, 6:g (S)
8. O152, 1v
9. Z83, 211
10. Z4481, 211,14
11. Z (Q7), 2, 6
12. Z4481, 81y8

Exercise-8

1. V44, 31 : 3v
2. V56: 1944 (X8 (J))
3. V44y7M89
4. V44, 4N8: 3 'NP04
5. W44, 6
6. W0gU
7. W: 58(4). 1(Q7)
8. Wrr: 195p44, P04
9. X625: 11.44
10. XM, 9B, 8 (J381). 4443
11. X8 (M7): 97D, 9D, 8
12. X8 (M13): 99C, 79D, 6.4412