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# Drawing of Random Seven-Digit Numbers from a Tables of Random Two-Digit Numbers and of Three-Digit Numbers

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**ABSTRACT:** A method has been composed for drawing of random seven-digit numbers jointly from two independent tables of random two-digit numbers and one table of random three-digit numbers as the only method of drawing of random seven-digit numbers since there exists neither a table of random seven-digit numbers nor a method of drawing of random seven-digit numbers. This paper describes the derivation of the method with numerical example in order to show the application of the method composed.

**KEYWORDS**: Table of random three-digit numbers, drawing of random seven-digit numbers, method of drawing n

## I. INTRODUCTION

Several tables have already been constructed for random numbers . These tables have been constructed by *Tippett* (1927), *Mahalanobis* (1934), *Kendall* & *Smith* (1938 , 1939), *Fisher* & *Yates* (1938), *Hald* (1952), *Royo* & *Ferrer* (1954), *RAND Corporation* (1955), *Quenouille* (1959), *Moses* & *Oakford* (1963), *Rao*, *Mitra* & *Matthai* (1966), *Snedecor* and *Cochran* (1967), *Rohlf* & *Sokal* (1969), *Manfred* (1971), *Hill* & *Hill* (1977) and others. Among these tables, the following four tables are treated as suitable in drawing of simple random sample (with or without replacement) from a population (*Cochran*, 1940):

(1) Tippett's Random Numbers Table that consists of 10,400 four-digit numbers giving in all 41,600 single digits selected at random from the British Census report (*Tippett*, 1927).

(2) Fisher and Yates Random Numbers Table that comprises 15000 digits arranged in two's (*Fisher* & *Yates*, 1938).

(3) Kendall and Smith's Random Numbers that consists of 100,000 digits grouped into 25,000 sets of random four-digit numbers (*Kendall* & *Smith*, 1938).

(4) Random Numbers Table by Rand Corporation that contains of one million digits consisting of 200,000 random numbers of 5 digits each (*Rand Corporation*, 1955).

In a study made by *Chakrabarty* (2010) on the testing of randomness of the table due to *Fisher* and *Yates* (1938), it has been found that this deviates significantly from proper randomness. Due to this reason, one table consisting of 6000 random occurrences of the 100 three-digit numbers has been constructed as an alternative/competitor of this table (*Chakrabarty*, 2013*a*). Also, one table containing 5000 random occurrences of the 1000 three-digit numbers has been constructed by *Chakrabarty* (2013*b*) due to the unavailability of such table of three-digit numbers. Two more tables, one containing 20000 occurrences of random three-digit numbers and the other containing 20000 occurrences of random three-digit numbers, have also been constructed by the same author [*Chakrabarty*(2013*a* , 2016*b*)]. Recently, study has been made on testing the proper randomness of the random number tables due to Tippett (*Sarmah* & *Chakrabarty*, 2014), due to Kendall & Smith (*Sarmah* & *Chakrabarty*, 2014*b*), due to *Rand Corporation* (*Sarmah*, *Chakrabarty* & *Barman* (2015*b*). In the studies, each of the tables has been found to be suffered from proper randomness. This leads to think of constructing of table of random four-digit numbers. Moreover, there is or there may be necessity of drawing of random five-digit numbers, random seven-digit numbers, random seven-digit numbers etc.. However, due to the increasing difficulties in the construction of tables of these types of random numbers by the method composed by *Chakrabarty* (2013*a*), it had been compelled to think of an alternative approach of drawing of these types of random numbers. As the first attempt on this approach, one method was developed for drawing of random five-digit numbers from the tables of random three-digit numbers and of random three-digit numbers (*Chakrabarty*, 2016*c*). Later on, in a study, one method was derived for drawing of random six-digit numbers from the two independent tables of random three-digit numbers (*Chakrabarty*, 2016*d*). In another study, one method has been developed for drawing of random six-digit numbers from three independent tables of random three-digit numbers

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(*Chakrabarty*, 2016*e*). In these two methods of drawing of random six-digit numbers, two or more tables are required. In the first method of these two, two tables are required while in the second method of these two, three tables are required. This leads to the necessity of some method of drawing random six-digit numbers from a single table of random numbers. In a study (*Chakrabarty*, 2016*f*), one method has been developed for drawing of random six-digit numbers from a single table of random two-digit numbers. In another study (*Chakrabarty*, 2016*g*), one method has been developed for drawing of random six-digit numbers from a single table of random three-digit numbers. However, there exists neither a table of random seven-digit numbers nor a method of drawing of random seven-digit numbers. In this study attempt has been made on drawing of random seven-digit numbers. A method has been composed for drawing of random seven-digit numbers jointly from two independent tables of random two-digit numbers and one table of random three-digit numbers as the only method of drawing of random seven-digit numbers since there exists neither a table of random seven-digit numbers nor a method of drawing of random seven-digit numbers. This paper describes the derivation of the method with numerical example in order to show the application of the method composed.

## II. DRAWING OF RANDOM TWO-DIGIT NUMBERS

Steps in the method of drawing of random two-digit numbers **(not necessarily distinct)** from each of the two independent tables of random two-digit numbers constructed by Chakrabarty (2013*a* , 2016*a*) is as follows:

1. Select one position from where to start at random by the similar method as in the case of drawing of distinct random two-digit numbers mentioned above. Let the $i^{th}$ position be selected.

   **One method of selecting the starting position is as follows:**

   Take a set of 10 identical small balls marking them by the 10 digits

   $$0 , 1 , 2 , 3 , 4 , 5 , 6 , 7 , 8 , 9$$

   respectively and put them inside a opaque container $C_1$ .

   Similarly, take another set of 4 identical small balls marking them by

   $$L \ , \ R \ , \ M_1 \ \& \ M_2$$

   respectively and put them inside a different opaque container $C_2$ .

   Now, draw one ball at random from the container $C_1$ containing the 10 balls and note down digit appeared on it.

   Let the digit drawn be $d_1$.

   Next, draw another ball at random from the container $C_1$ containing the same 10 balls and note down digit appeared on it.

   Let the digit drawn at this stage be $d_2$.

   Then, draw one ball at random from the container $C_2$ putting 2 balls marked with $L$ & $R$ inside it.

   If the drawn ball is $R$, put the digit $d_2$ at the right position of $d_1$ and if the drawn ball is $L$, put the digit $d_2$ at the left position of $d_1$. Thus if the ball $R$ appears, the selected two-digit number will be $d_1 d_2$ and if the ball $L$ appears, the selected two-digit number will be $d_2 d_1$.

   Let the selected two-digit number be $d_2 d_1$.

   Next, draw another ball at random from the container $C_1$ containing all the 10 balls and note down digit appeared on it.

   Let the digit drawn here be $d_3$.

   Then, draw one ball at random from the container $C_2$ putting 3 balls marked with

   $$L \ , \ M_1 \ \& \ M_2$$

   inside it and put the digit $d_3$ at the

   left position of $d_2 d_1$ if the drawn ball is $L$ ,

   middle position of $d_2 d_1$ if the drawn ball is $M_1$

   & right position of $d_2 d_1$ if the drawn ball is .

   Thus the selected three-digit number will be $d_3 d_2 d_1$ or $d_2 d_3 d_1$ or $d_2 d_1 d_3$ in accordance with the selected ball is $L$ or $M_1$ or $R$ .

   Let the selected three-digit number be $d_2 d_3 d_1$.

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Finally, draw another ball at random from the container $C_1$ containing all the 10 balls and note down digit appeared on it. Let the digit drawn here be $d_4$.

Then, draw one ball at random from the container $C_2$ putting 4 balls marked with

$$L \ , \ M_1 \ , M_2 \ \& \ R$$

inside it and put the digit $d_4$ at the

left position of $d_2d_3d_1$ if the drawn ball is $L$ ,

1st middle position (from left) of $d_2d_3d_1$ if the drawn ball is $M_1$ ,

2nd middle position (from left) of $d_2d_3d_1$ if the drawn ball is $M_2$

& right position of $d_2d_3d_1$ if the drawn ball is .

Thus the selected four-digit number will be $d_4d_3d_2d_1$ or $d_2d_4d_3d_1$ or $d_2d_1d_4d_3$ or $d_2d_1d_3d_4$ in accordance with the selected ball is $L$ or $M_1$ or $M_2$ or $R$ .

The position of the four-digit number selected here will be the required starting position.

2. Draw the number that occurs at the $i^{th}$ position in the table.
3. Chose the length of jump that is to be 101 or more and 199 or less at random. It can be chosen by some usual manual randomization technique of drawing one number from among the numbers

   101 , 102 , 103 , …… , 198 , 199.

   Let the selected length of jump be *l*.

   The random selection of the length of the jump can be done by similar method as done in the selection of the starting position.
4. Chose whether to jump towards left or towards right. The choice can be made by the same method as in the earlier case.
5. If it is chosen to jump towards right, draw the numbers occurred at the positions

   $$i \ , \ i + l \ , \ i + 2l \ , \ \ldots\ldots\ldots\ldots \ , \ i + (n-1)l$$

   in the table to obtain the required *n* random two-digit numbers.
6. If it is chosen to move towards left, draw the numbers occurred at the positions

   $$i \ , \ i - l \ , \ i - 2l \ , \ \ldots\ldots\ldots\ldots \ , \ i - (n-1)\, l$$

   in the table to obtain the required *n* random two-digit numbers.

## III. DRAWING OF RANDOM THREE-DIGIT NUMBERS

Steps in the method of drawing of random three-digit numbers **(not necessarily distinct)** from each of the two independent tables of random three-digit numbers constructed by Chakrabarty (2013*b* , 2016*b*) is as follows:

1. Select one position from where to start at random by the similar method as in the case of drawing of distinct random three-digit numbers mentioned above. Let the $i^{th}$ position be selected.

   **Method of selecting the starting position has been mentioned in the step no 1 in Section II.**

2. Draw the number that occurs at the $i^{th}$ position in the table.
3. Chose the length of jump that is to be 1001 or more and 1999 or less at random. It can be chosen by some usual manual randomization technique of drawing one number from among the numbers

   1001 , 1002 , 1003 , …… , 1999.

   Let the selected length of jump be *l*.

   The random selection of the length of the jump can be done by similar method as done in the selection of the starting position.
4. Chose whether to jump towards left or towards right. The choice can be made by the same method as in the earlier case.
5. If it is chosen to jump towards right, draw the numbers occurred at the positions

   $$i \ , \ i + l \ , \ i + 2l \ , \ \ldots\ldots\ldots\ldots \ , \ i + (n-1)\, l$$

   in the table to obtain the required *n* random thre-digit numbers.

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6. If it is chosen to move towards left, draw the numbers occurred at the positions

$$i\ ,\ i-l\ ,\ i-2l\ ,\ \ldots\ldots\ldots\ldots\ ,\ i-(n-1)\,l$$

in the table to obtain the required *n* random three-digit numbers.

## IV. DRAWING OF RANDOM SEVEN-DIGIT NUMBERS

In order to draw random seven-digit numbers, any two of the three tables of random two-digit numbers together with any one of the three tables of random three-digit numbers are to be used. Let the two independent tables of random two-digit numbers to be used here be denoted by Table—A & Table-B respectively and the table of random three-digit numbers to be used be denoted by Table-C.

Let

$$d_1d_2\ \&\ d_3d_4$$

be two random two-digit numbers drawn at from two independent tables namely Table-A & Table-B respectively and

$$d_5d_6d_7$$

be one random three-digit numbers drawn at from a table namely Table-C of random three-digit numbers.

The possible values that $d_1d_2$ assumes are the 100 two-digit numbers

00 , 01 , 02 , …… , 98 , 99

and the probability that $d_1d_2$ assumes any of them is equal which is 0.01.

Similarly, the possible values that $d_3d_4$ assumes are also the 100 two-digit numbers

00 , 01 , 02 , …… , 98 , 99

and the probability that $d_3d_4$ assumes any of them is equal which is 0.01.

Again, possible values that $d_5d_6d_7$ assumes are the 1000 three-digit numbers

000 , 001 , 002 , …… , 998 , 999

and the probability that $d_5d_6d_7$ assumes any of them is equal which is 0.001.

Now if the three numbers

$$d_1d_2\ ,\ d_3d_4\ \&\ d_5d_6d_7$$

are combined together to form the seven-digit number $d_1d_2d_3d_4d_5d_6d_7$ then possible values that $d_1d_2d_3d_4d_5d_6d_7$ assumes are the 10000000 seven-digit numbers

0000000 , 0000001 , 0000002 , …… , 9999998 , 9999999

and the probability that $d_1d_2d_3d_4d_5d_6d_7$ assumes any one of them is equal which is 0.0000001 (since the three numbers $d_1d_2$ , $d_3d_4$ & $d_5d_6d_7$ are independent).

Therefore, the seven-digit number $d_1d_2d_3d_4d_5d_6d_7$ is a random one.

Similarly, each of the numbers five seven-digit numbers

$$d_1d_2d_5d_6d_7d_3d_4\ ,\ d_3d_4d_1d_2d_5d_6d_7\ ,\ d_3d_4d_5d_6d_7d_1d_2\ ,\ d_5d_6d_7d_1d_2d_3d_4\ \&\ d_5d_6d_7d_3d_4d_1d_2$$

is also random.

If a seven-digit number is selected from these six seven-digit numbers by performing a random trial consisting of six possible outcomes (for example by throwing of a fair dice), the selected number will be a random seven-digit number.

If the process is repeated once, one more random seven-digit number can be obtained. By further repetitions, one can obtain more random seven-digit numbers.

**Thus, in order to draw *n* random seven-digit numbers one can proceed with the following steps:**

(1) Make a choice at random which table's numbers will be placed at the left position, which table's numbers will be placed at the middle position and which table's numbers will be placed at the right position while combining them in the formation of random seven-digit numbers. This can be done by a random trial that results in six possible outcomes namely.

($d_1d_2$ at Left , $d_3d_4$ at Middle , $d_5d_6d_7$ at Right) ,

($d_1d_2$ at Left , $d_5d_6d_7$ at Middle , $d_3d_4$ at Right) ,

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($d_3 d_4$ at Left , $d_1 d_2$ at Middle , $d_5 d_6 d_7$ at Right) ,
($d_3 d_4$ at Left , $d_5 d_6 d_7$ at Middle , $d_1 d_2$ at Right) ,
($d_5 d_6 d_7$ at Left , $d_1 d_2$ at Middle , $d_3 d_4$ at Right) ,
($d_5 d_6 d_7$ at Left , $d_3 d_4$ at Middle , $d_1 d_2$ at Right) .

Throwing of an unbiased dice, distinguishing its six sides by the six possible outcomes, can be performed in selecting the said choice.

(2) Select two tables at random from the three tables of random two-digit numbers.
(3) Select one table at random from the three tables of random three-digit numbers.
(4) Draw *n* random two-digit number from each of the two selected tables of random two-digit numbers by the steps as outlined in section II*a*.
(5) Draw *n* random three-digit number from the selected table of random three-digit numbers by the steps as outlined in section II*b*.
(6) Combine the three sets of drawn numbers by the choice of the positions obtained in step (1) to obtain the *n* random seven-digit numbers.

**In order to draw *n* random seven-digit numbers one can also proceed with the following steps:**

(1) Select two tables at random from the three tables of random two-digit numbers.
(2) Select one table at random from the three tables of random three-digit numbers.
(3) Draw one random two-digit number from each of the two selected tables of random two-digit numbers by the steps as outlined in section II*a*.
(4) Draw one random three-digit number from the selected table of random three-digit numbers by the steps as outlined in section II*b*.
(5) Make a choice at random which table's numbers will be placed at the left position, which table's numbers will be placed at the middle position and which table's numbers will be placed at the right position while combining them in the formation of random seven-digit numbers. This can be done by a random trial that results in six possible outcomes as mentioned above.
(6) Combine the three drawn numbers as per the selected choice of the positions to obtain one random seven-digit number.
(4) Repeat the above steps more ($n - 1$) times to obtain *n* random seven-digit numbers.

## V. NUMERICAL EXAMPLE

**Example 5.1:** Let it be wanted to draw 10 random seven-digit numbers from the three tables namelyTable-A, Table-B & Table-C.

***First method of drawing***

Let us make a choice, by performing a trial described in step no (1) in section III, which table's numbers will be placed at the left position, which table's numbers will be placed at the middle position and which table's numbers will be placed at the right position while combining them in the formation of random seven-digit numbers. Let the selected choice be that the numbers drawn from Table-A, Table-B & Table-C will be placed at left position, middle position & right position respectively.

Now, let us draw 10 random two-digit numbers from Table-A by the steps as outlined in the section II*a*. Let the numbers drawn be

76 , 58 , 94 , 39 , 02 , 60 , 29 , 33 , 36 , 08, 46, 72, 55, 39, 83, 45, 71, 96, 29, 04 .

Again, let us draw 10 random two-digit numbers from Table-B by the same steps as outlined in the section 3.2.2. Let the numbers drawn be

37 , 90 , 08 , 58 , 39 , 15 , 55 , 38 , 52 , 77, 14, 02, 84, 41, 97, 04, 59, 36, 57 , 69 .

Next, let us draw 10 random three-digit numbers from Table-5.3.1 1 by the steps as outlined in the section 3.3.2. Let the numbers drawn be

811 , 682 , 707 , 218 , 966 , 171 , 020 , 582 , 591 , 122 , 384 , 666 , 823 , 199 , 019, 270 , 227 , 854 , 363 , 707 .

Thus the 10 random seven-digit numbers to be selected will be

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7637811 , 5890682 , 9408707 , 3958218 , 0239966 , 6015171 , 2955020 , 3338582 , 3652591 , 0877122 , 4614384 , 7202666 , 5584823 , 3941199 , 8397019 , 4504270 , 7159227 , 9636854 , 2957363 , 0469707 .

***Second way of drawing***

First, let us draw three random two-digit numbers one from Table-A, one from Table-B and the other from Table-C by the method due to *Chakrabarty* (2013*a*). Let the three numbers drawn be

76 , 37 , 811 .

Next, let a trial namely the throwing of a fair dice be performed to choice which table's two-digit numbers will be placed at the left position, which table's two-digit numbers will be placed at the middle position and which table's two-digit numbers will be placed at the right position while combining them in the formation of random seven-digit numbers. Suppose, the selected choice is as follows:

Two-digit numbers to be drawn from **Table-C** will be placed at the left position,
Two-digit numbers to be drawn from **Table-A** will be placed at the middle position
& Two-digit numbers to be drawn from **Table-B** will be placed at the right position

Thus, the 1st selected seven-digit random number is 8117637 .

In order to obtain the remaining 19 random seven-digit numbers, the two steps are to be repeated 19 times.

Let the outcomes of the repetitions are as follows (mentioned in Table-5.1):

Table-5-1

| Serial No of Repetition | Two-digit Number obtained from Table-A | Two-digit Number obtained from Table-B | Three-digit Number obtained from Table-C | Outcome of the Random Trial: Position of Two-digit Number of | | | Selected Seven-digit Number |
|---|---|---|---|---|---|---|---|
| | | | | Table-A | Table-B | Table-C | |
| 1 | 58 | 90 | 682 | Right | Middle | Left | 6829058 |
| 2 | 94 | 08 | 707 | Middle | Right | Left | 7079408 |
| 3 | 39 | 58 | 218 | Right | Left | Middle | 5821839 |
| 4 | 02 | 39 | 966 | Left | Middle | Right | 0215966 |
| 5 | 60 | 15 | 171 | Left | Middle | Right | 6015171 |
| 6 | 29 | 55 | 020 | Middle | Left | Right | 5529020 |
| 7 | 33 | 38 | 582 | Right | Left | Middle | 3858233 |
| 8 | 36 | 52 | 591 | Left | Middle | Right | 3652591 |
| 9 | 08 | 77 | 122 | Right | Middle | Left | 1227708 |
| 10 | 46 | 14 | 384 | Middle | Right | Left | 3844614 |
| 11 | 72 | 02 | 666 | Right | Left | Middle | 0266672 |
| 12 | 55 | 84 | 823 | Left | Right | Middle | 5582384 |
| 13 | 39 | 41 | 199 | Right | Middle | Left | 1994139 |
| 14 | 83 | 97 | 019 | Left | Middle | Right | 8397019 |
| 15 | 45 | 04 | 270 | Left | Middle | Right | 4504270 |
| 16 | 71 | 59 | 227 | Middle | Right | Left | 2277159 |
| 17 | 96 | 36 | 854 | Right | Left | Middle | 3685496 |
| 18 | 29 | 57 | 363 | Middle | Left | Right | 5729363 |
| 19 | 04 | 69 | 707 | Left | Middle | Right | 0469707 |

Thus, the selected 20 random seven-digit numbers to are

8117637 , 6829058 , 7079408 , 5821839 , 0215966 , 6015171 , 5529020 , 3858233 , 3652591 , 1227708 , 3844614 , 0266672 , 5582384 , 1994139 , 8397019 , 4504270 , 2277159 , 3685496 , 5729363 , 0469707 .

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## VI. CONCLUSION

There exists neither a table of random seven-digit numbers nor a method of drawing of random seven-digit numbers. Thus, the method of drawing of random seven-digit numbers, developed here, is the only method of drawing of random seven-digit numbers.

It is to be noted that it is a problem for researcher to make study on construction of a set/table of random seven-digit numbers in order to draw random seven-digit numbers from a single table. The method of drawing of random seven-digit numbers from a single table of random seven-digit numbers is expected to be simpler one than that of the method composed here.

It is to be noted that among the two methods of drawing of random seven-digit numbers, explained in Section III, the first one is simpler than the second one.

## REFERENCES

[1]Dhritikesh Chakrabarty (2010): "Chakrabarty's Definition of Probability: Proper Randomness of Fisher and Yates Random Number Table ", Int. J. Agricult. Stat. Sci., 6 (2), (ISSN : 0973 – 1903), 461 – 469.

[2]Dhritikesh Chakrabarty (2011): "Probability in Ideal Situation and in Practical Situation", Arya Bhatta J. Math. & Info. , 3 (1), (ISSN : 0975 – 7139), 161 – 168.

[3]Dhritikesh Chakrabarty (2013*a*): "One Table of Random three-digit numbers", AryaBhatta J. Math. & Info. , (ISSN : 0975 – 7139), 5 (1), 141 – 152.

[4]Dhritikesh Chakrabarty (2013*b*): "One Table of Random three-digit Numbers", AryaBhatta J. Math. & Info. , (ISSN : 0975 – 7139), 5 (2), 285 – 294.

[5]Dhritikesh Chakrabarty (2016*a*) : "One More Table of Random Three-digit numbers", International Journal of Advanced Research in Science, Engineering and Technology, (ISSN : 2350 – 0328), 3(3), 1667 – 1678, Also available in www.ijarset.com.

[6]Dhritikesh Chakrabarty (2016*b*) : "One More Table of Random Three-Digit Numbers", International Journal of Advanced Research in Science, Engineering and Technology, (ISSN : 2350 – 0328), 3(4), 1851 – 1869, Also available in www.ijarset.com.

[7]Dhritikesh Chakrabarty (2016*c*) : "Drawing of Random Five-Digit Numbers from Tables of Random Two-Digit and Three-Digit Numbers", *International Journal of Advanced Research in Science, Engineering and Technology*, (ISSN : 2350 – 0328), 3(7), 2385 – 2306, Also available in www.ijarset.com.

[8]Dhritikesh Chakrabarty (2016*d*) : "Drawing of Random Six-digit Numbers from Tables of Random Three-Digit Numbers", *International Journal of Advanced Research in Science, Engineering and Technology*, (ISSN : 2350 – 0328), 3(8), 2507 – 2515, Also available in www.ijarset.com.

[9]Dhritikesh Chakrabarty (2016*e*) : "Drawing of Random Six-digit Numbers from Tables of Random Two-digit numbers", *International Journal of Advanced Research in Science, Engineering and Technology*, (ISSN : 2350 – 0328), 3(9), 2643 – 2655, Also available in www.ijarset.com.

[10]Dhritikesh Chakrabarty (2016*f*) : "Drawing of Random Six-digit Numbers from a Single Table of Random Two-digit numbers", *International Journal of Advanced Research in Science, Engineering and Technology*, (ISSN : 2350 – 0328), 3(10), 2743 – 2753, Also available in www.ijarset.com.

[11]Dhritikesh Chakrabarty (2016*g*) : "Drawing of Random Six-Digit Numbers from a Single Table of Random Three-Digit Numbers", *International Journal of Advanced Research in Science, Engineering and Technology*, (ISSN : 2350 – 0328), 3(11), 2905 – 2914, Also available in www.ijarset.com.

[12]Fisher R. A. (1938): "Statistical Tables for Biological, Agricultural and Medical Research", 6th Edition (1982), Longman Group Limited, England, 37 – 38 & 134 – 139.

Hald A. (1952): "Table of random numbers", In: A. Hald: Statistical Tables and Formulas, Wiley.

[13]Hill I. D. & Hill P. A. (1977): "Tables of Random Times", U.K.

[14]Kendall M. G. & Smith B. B. (1938): "Randomness and Random Sampling Numbers", Jour. Roy. Stat. Soc., 101(1), 147 – 166.

[15]Kendall M. G. & Smith B. B. (1939): "A Table of Random Sampling Numbers", Tracts for Computers no. 24, Cambridge University Press, Cambridge, England.

[16]Mahalanobis P. C. (1934): "Tables of random samples from a normal population", Sankya, 1, 289 − 328.

[17]Manfred Mohr (1971): "Le Petit Livre de Nombres au Hasar", Édition d'artiste, Paris.

[18]Moses E. L. & Oakford V. R. (1963): "Tables of Random Permutations", George Allen & Unwin.

[19]Quenouille M. H. (1959): "Tables of Random Observations from Standard Distributions", Biometrika, 46, 178-202.

[20]Rand Corporation (1955): "A Million Random Digits with 100,000 Normal Deviates", Free Press, Glencoe, Illinois.

[21]Rao C. R. , Mitra S. K. & Matthai A. (1966): "Random Numbers and Permutations", Statistical Publishing Society, Calcutta.

[22]Rohlf F. J. & Sokal R. R. (1969): "Ten Thousand Random Digits", In: Rohlf & Sokal: Statistical Tables, Freeman.

[23]Royo J. & Ferrer S. (1954): "Tables of Random Numbers Obtained from Numbers in the Spanish National Lottery", Trabajos de Estadistica, 5, 247 − 256.

[24]Sarmah Brajendra Kanta & Chakrabarty Dhritikesh (2014): "Examination of Proper Randomness of the Number Generated by L. H. C. Tippett ", International Journal of Engineering Sciences & Research Technology, (ISSN : 2277 - 9655), 3(12), 631 – 638.

[25]Sarmah Brajendra Kanta & Chakrabarty Dhritikesh (2015a): "Testing of Proper Randomness of the Table of Number Generated by M. G. Kendall and B. Babington Smith (1939)", International Journal of Engineering Sciences & Research Technology, (ISSN : 2277 - 9655), 4(2), 260 – 282.

[26]Sarmah Brajendra Kanta, Chakrabarty Dhritikesh & Barman Nityananda (2015b) : "Testing of Proper Randomness of the Table of Number Generated by Rand Corporation (1955) ", International Journal of Engineering Sciences & Management, (ISSN : 2277 - 5528), 5(1), 97 – 119.

[27]Snedecor G. W. & Cochran W. G. (1967): "Statistical Methods", Iowa State University Press, Ames, Iowa, 6th Edition.

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[28]Tippett L .H. C. (1927): "Random Sampling Numbers", Tracts for Computers no. 15, Cambridge University Press, Cambridge, England.

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Dr. Dhritikesh Chakrabarty passed B.Sc. (with Honours in Statistics) Examination from Darrang College, Gauhati University, in 1981 securing 1st class &1st position. He passed M.Sc. Examination (in Statistics) from the same university in the year 1983 securing 1st class & 1st position and successively passed M.Sc. Examination (in Mathematics) from the same university in 1987 securing 1st class (5th position). He obtained the degree of Ph.D. (in Statistics) in the year 1993 from Gauhati University. Later on, he obtained the degree of Sangeet Visharad (inVocal Music) in the year 2000 from Bhatkhande Sangeet vidyapith securing 1st class, the degree of Sangeet Visharad (in Tabla) from Pracheen Kala Kendra in 2010 securing 2nd class, the degree of Sangeet Pravakar (in Tabla) from Prayag Sangeet Samiti in 2012 securing 1st class and the degree of Sangeet Bhaskar (in Tabla) from Pracheen Kala Kendra in 2014 securing 1st class. He obtained Jawaharlal Nehru Award for securing 1st position in Degree Examination in the year 1981. He also obtained Academic Gold Medal of Gauhati University and Prof. V. D. Thawani Academic Award for securing 1st position in Post Graduate Examination in the year 1983.

Dr. Dhritikesh Chakrabarty is also an awardee of the Post Doctoral Research Award by the University Grants Commission for the period 2002–05.

He attended five of orientation/refresher course held in Gauhati University, Indian Statistical Institute, University of Calicut and Cochin University of Science & Technology sponsored/organized by University Grants Commission/Indian Academy of Science. He also attended/participated eleven workshops/training programmes of different fields at various institutes.

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Dr. Dhritikesh Chakrabarty joined the Department of Statistics of Handique Girls' College, Gauhati University, as a Lecturer on December 09, 1987 and has been serving the institution continuously since then. Currently he is in the position of Associate Professor (& Ex Head) of the same Department of the same College. He has also been serving the National Institute of Pharmaceutical Education & Research (NIPER), Guwahati, as a Guest Faculty continuously from May 02, 2010. Moreover, he is a Research Guide (Ph.D. Guide) in the Department of Statistics of Gauhati University and also a Research Guide (Ph.D. Guide) in the Department of Statistics of Assam Down Town University. He has been guiding a number of Ph.D. students in the two universities. He acted as Guest Faculty in the Department of Statistics and also in the Department of Physics of Gauhati University. He also acted as Guest Faculty cum Resource Person in the Ph.D. Course work Programme in the Department of Computer Science and also in the Department of Biotechnology of the same University for the last six years. Dr. Chakrabarty has been working as an independent researcher for the last more than twenty five years. He has already published eighty five research papers in various research journals mostly of international level and eight research papers in conference proceedings. Sixty research papers based on his research works have already been presented in research conferences/seminars of national and international levels both within and outside India. He has written two books titled (i) Statistics for Beginners and (ii) Selection of Random Samples: Drawing of Random Numbers. He is also one author of the Assamese Science Dictionary titled "Vigyan Jeuti" published by Assam Science Society. Moreover, he is one author of the research book "BIODIVERSITY- Threats and Conservation (ISBN-978-93-81563-48-9)" published by the Global Publishing House. He delivered invited talks/lectures in several seminars He acted as chair person in some seminars. He visited U.S.A. in 2007, Canada in 2011 and U.K. in 2014. He has already completed one post doctoral research project (2002─05) and one minor research project (2010─11). He is an active life member of the academic cum research organizations namely (1) Assam Science Society (ASS), (2) Assam Statistical Review (ASR), (3) Indian Statistical Association (ISA), (4) Indian Society for Probability & Statistics (ISPS), (5) Forum for Interdisciplinary Mathematics (FIM), (6) Electronics Scientists & Engineers Society (ESES) and (7) International Association of Engineers (IAENG). Moreover, he is a Referee of the Journal of Assam Science Society (JASS) and a Member of the Editorial Board of (i) the Journal of Environmental Science, Computer Science and Engineering & Technology (JECET) and (ii) Journal of Mathematics & System Science. Dr. Chakrabarty acted as members (at various capacities) of the organizing committees of a number of conferences/seminars already held.