MLISC 2nd Semester Examination, 2015

RESEARCH METHODOLOGY AND QUANTITATIVE TECHNIQUES

PAPER —MLI- 206

Full Marks : 40

Time : 2 hours

Answer **all** questions

The figures in the right hand margin indicate marks

Candidates are required to give their answers in their own words as far as practicable

1. Write short notes on the following :   5 + 5

   (*i*) Delphi design

   Or

   Lotka's law of author productivity

(*ii*) Action research.

Or

Scientometrics : meaning and purpose.

2. (*a*) Distinguish between 'Research methods' and 'Research methodology'. Briefly describe the different steps involved in a research process in the context of LIS research. 5 + 10

Or

(*b*) (*i*) Describe with illustration price model of growth of literature.

(*ii*) Compare analytically between Logistic model and exponential model of growth of literature.

(*iii*) State Bradford's law of bibliographic scattering. 7 + 5 + 3

3. (a) (i) Find out mean and standard deviation of first 'n' natural numbers.

   (ii) Show that for any two discreate random variable x_1 and x_2,

   $$GM = \sqrt{AM \times HM}$$

   where GM → Geometric mean

   AM → Arithmatic mean

   HM → Harmonic mean

   (iii) What is sampling ? Distinguish between random sampling and systematic sampling. 4 + 5 + 6

Or

(b) (i) Define Pearson's product-moment correlation coefficient.

   (ii) The following data give ranks of 12 journals by two different methods :

(*Turn Over*)

Sl. No.	Rank according to the No. of Publication	Rank according to the No. of Citation
1	1	12
2	2	9
3	3	6
4	4	10
5	5	3
6	6	5
7	7	4
8	8	7
9	9	8
10	10	2
11	11	11
12	12	1

Calculate Spearman's Rank correlation coefficient.   3 + 12

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