

MLIBISc 2nd Semester Examination, 2023

MLIBISC

(Studies of Academic Metrics)

PAPER – MLI-209

Full Marks : 40

Time : 2 hours

The figures in the right hand margin indicate marks

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

GROUP – A

Answer any two questions : 10 × 2

- 1. Enumerate the major purposes of citation as stated by Eugene Garfield. Define 'Bibliographic coupling' and 'Co-citation coupling'. 6 + 4**

2. Define 'Two-year Journal Impact Factor' and 'Immediacy Index'. Explain Sen's concept of 'Normalised Impact Factor'. Define Ranganathan's concept of Librametry. 4 + 3 + 3
3. Explain Bradford's Law of Bibliographic Scattering and Lotka's Law of Author Productivity. Discuss Sengupta's correction to Bradford's Law. 4 + 4 + 3
4. The citation distribution of ranked articles contributed by an author is presented in the Table below. Calculate the following indicators from this Table: (i) *h*-Index (ii) *i*10-Index (iii) *g*-Index (iv) *e*-Index (v) *R*-index (vi) *a*-Index (vii) Number of Tail Citation (viii) Number of *h*-excess Citation (ix) Cited-Uncited Ratio (x) *h*-Excess—*h*-Tail Ratio. 10

S. No.	Rank of the Articles	Articles	Number of Citations Received
1	1	Article_1	85
2	2	Article_2	52

S. No.	Rank of the Articles	Articles	Number of Citations Received
3	3	Article_3	31
4	4	Article_4	25
5	5	Article_5	19
6	6	Article_6	17
7	7	Article_7	14
8	7	Article_8	14
9	8	Article_9	11
10	9	Article_10	10
11	9	Article_11	10
12	10	Article_12	9
13	10	Article_13	9
14	11	Article_14	8
15	12	Article_15	7
16	12	Article_16	7
17	12	Article_17	7
18	13	Article_18	6
19	13	Article_19	6

S. No.	Rank of the Articles	Articles	Number of Citations Received
20	13	Article_20	6
21	13	Article_21	6
22	14	Article_22	5
23	14	Article_23	5
24	14	Article_24	5
25	14	Article_25	5
26	14	Article_26	5
27	15	Article_27	4
28	15	Article_28	4
29	15	Article_29	4
30	16	Article_30	3
31	16	Article_31	3
32	16	Article_32	3
33	16	Article_33	3
34	17	Article_34	2
35	17	Article_35	2
36	17	Article_36	2

S. No.	Rank of the Articles	Articles	Number of Citations Received
37	18	Article_37	1
38	18	Article_38	1
39	18	Article_39	1
40	18	Article_40	1
41	19	Article_41	0
42	19	Article_42	0
43	19	Article_43	0
44	19	Article_44	0
45	19	Article_45	0

GROUP – B

Answer any **four** questions : 5 × 4

5. Explain Logistic model. Exponential model and power model of growth of literature of a *subject*.

5

6. Explain the concept of 'Altmetrics'. List different components used to calculate 'Altmetric Attention Score'. 3 + 2
7. Explain why h-Index is an incomplete indicator. Define 'Degree of Collaboration'. 3 + 2
8. Define ORCID and SJR. $2\frac{1}{2} \times 2$
9. Define the concept of 'Obsolescence'. State Benford's Law. 2 + 3
10. For a subject 'S' the relationship between the number of contributing authors and the number of contributed articles may be presented as follows : 5
- 1 author contributed 55 articles
 - 2 authors contributed 30 articles each
 - 3 authors contributed 25 articles each
 - 4 authors contributed 20 articles each
 - 5 authors contributed 10 articles each

8 authors contributed 5 articles each

12 authors contributed 4 articles each

20 authors contributed 3 articles each

27 authors contributed 2 articles each

50 authors contributed 1 articles each

Find out Lotka's equation for this authorship distribution.
