

Indian Statistical Institute Documentation Research and Training Centre

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MSLIS IV semester (2024-26) (Final)

Date: April 22, 2026

Marks: 100

Paper-15: Informetrics and Scientometrics

Time: 3 hours

PART - A. Answer the following questions by choosing the BEST answer.

12x1=12

Answer any TWELVE

1. Which of the following statements is **NOT** correct?
 - a) Altmetrics capture the impact of policy documents
 - b) Altmetrics is not accepted as equal to expert opinion because it fails to capture scientific impact
 - c) PLUMX captures traditional and altmetrics ✓
 - d) It is possible to inflate the altmetrics data

2. Which of the following is not related to obsolescence?
 - a) Information Ageing
 - b) Mean Citation Age
 - c) Half-Life
 - d) Total Life of an information piece ✓

3. Which of the following is **not** a parameter in descriptive bibliometrics
 - a) Citation impact ✓
 - b) Form of communication
 - c) Subject of information
 - d) Language characteristics

4. Which of the following statements is correct?
 - a) Multi-authored papers receive more citations.
 - b) The characteristics of multi-authored papers are uniform across domains
 - c) Institutional agreements lead to more multi-authored papers
 - d) All the above are correct

5. Which of the following is **not** a citation-based indicator?
 - a) H Index
 - b) Immediacy Index
 - c) Journal Acceptance Rate
 - d) SNIP

1 - C
2 - D
3 - A
4 - A
5 - C
6 - B
7 - A
8 - A
9 - D
10 - D
11 - D
12 - A
13 - D
14 - D
15 - D

6. Which of the following statements is incorrect?
- a) Each institutional ranking differs in methodology and parameters
 - b) Institutional ranking systems are largely correlated ✓
 - c) Institutional ranking outcomes differ considerably
 - d) ARWU ranking is prominent among various ranking systems
7. Which of the following is the **Best** answer?
- a) Normalisation is a measure to discount the size effect ✓
 - b) Normalisation denotes mean scores
 - c) Normalisation eases the limits in raw metrics
 - d) All the above
8. Which of the following cannot be mapped in science metrics analyses?
- a) ISSN of journals ✓
 - b) Citations
 - c) Keywords
 - d) Authors
9. Find the odd one out
- a) scientographs
 - b) bibliometric network visualisations
 - c) knowledge domain maps
 - d) peer reviews ✓
10. Which of the following AI tools is **most** suitable for scientometric analyses (metric and visual)?
- a) Grok and Google Gemini
 - b) Deepseek and Qwen
 - c) ChatGPT and copilot
 - d) Julius and Genspark ✓
11. Which of the following is not suitable for visualization?
- a) VOSviewer
 - b) CiteSpace
 - c) Bibexcel
 - d) Dimensions ✓
12. Which citation database detects the context of citations
- a) Scite ✓
 - b) Dimensions
 - c) Web of Science

d) Scopus

13. Keywords for the articles are generated by

- a) Authors
- b) Journal Editors/Publishers,
- c) Database Producers,
- d) All the above ✓

14. Which of the following is not used for text analysis?

- a) F Score
- b) Precision and recall
- c) Similarity Index
- d) H Index ✓

15. Which of the following is not used for trend forecasting?

- a) Patents
- b) Keywords
- c) Preprints
- d) Cited Half-life ✓

1. Part- B. Explain briefly the following (Any five)

5x4=20

1. What do you understand in the term Metrics? Explain it briefly.
2. What is textual data? How does it differ from bibliographic data?
3. Briefly write about inequality in information use.
4. Write a note about the H index.
5. What is the Journal Impact Factor? How is it calculated?
6. Name a few open-source datasets for research
7. Why is scientific collaboration on the increase? Which factors influence this increase?

2. Part- B. Explain briefly the following (Any five)

5x6=30

1. What is Behavioural Bibliometrics? How do bibliographic coupling and co-citations serve as tools to understand the relations in scientific literature? Provide suitable illustrations.
2. What is cited-half life? How it is calculated. What is the relation between the cited half-life and information growth?

3. Provide a descriptive statement about the contributions of D J Price **OR** Eugene Garfield to Scientometrics
4. Explain Lotka's law of author productivity
5. What is a citation network? How is it used to map authors and literature
6. Write a descriptive note on topic modelling
7. Why do Indian institutions score low in the ARWU ranking?

C. Answer the following questions in detail (Any Four)

4x 9.5=38

1. What are the benefits of Citation Indexing? Illustrate with features. Also, discuss the limitations of citation data and indexes.
2. Discuss the indicators to measure the impact of journals.
3. Discuss in detail 'Citation Analysis'.
4. What is a descriptive note of alternative indicators, including downloads, and non-citation-based evaluation?
5. Write a detailed note on peer review process? How do peer reviews score over other metrics?
6. Discuss the significance of the DORA declaration and the Leiden Manifesto.
7. What are the major issues or limitations in the NIRF ranking? What kinds of indicators can be added to increase the objectivity of the NIRF ranking?

=====END=====