

Answer any ten questions (Max. 100 marks).

1. Explain the differences between data, information, and knowledge. Illustrate with examples how each of these concepts plays a role in research.
2. Explain the differences between primary, secondary, and tertiary sources of information. How does the classification of information into these categories impact the research process?
3. Compare and contrast the MARC21 and Dublin Core metadata standards in particular based on their structure, scope, and application.
4. Explain the concept of reference service in libraries. Discuss how artificial intelligence (AI) is transforming reference services, specifically through the use of chatbots, virtual assistants, and AI-powered information retrieval systems.
5. Define an institutional repository and discuss its purpose. Explain how institutional repositories contribute to the preservation and sharing of academic and research outputs.
6. Discuss the concepts of copyright and licensing, highlighting their relevance to library services.
7. Briefly discuss the advantages and disadvantages of incremental budgeting, zero-based budgeting, and performance-based budgeting techniques. Which technique would you recommend for a public library and why?
8. Define the process of formulating a hypothesis in a research study. What are the key characteristics of a well-constructed hypothesis?
9. Explain the concept of research design. Briefly describe and compare the experimental and descriptive research design types.

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10. What is bibliographic coupling? Discuss its use in identifying related research papers and understanding the structure of academic knowledge.
 11. List the major network topologies and explain any one topology along with its advantages and disadvantages.
 12. Briefly, describe the following two:
 - (a) Taxonomy
 - (b) Co-citation analysis