JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT
TEST -1 EXAMINATION- 2026
M.Sc.-I Semester 2nd (BT)

COURSE CODE (CREDITS): 20MS1BT216 (2) MAX. MARKS: 15
COURSE NAME: Research methodology and scientific communication skill
COURSE INSTRUCTOR: GSB MAX. TIME: 1 Hour

Note: *(a) All questions are compulsory.*
(b) The candidate is allowed to make Suitable numeric assumptions wherever required for solving problems
(c) Use of calculators is not allowed

Q.No	Question	Marks
Q1	Case 1: A research group altered gel electrophoresis images to enhance band clarity and remove unwanted results before publication. A whistleblower reported the issue, and the journal retracted the paper after verification. Answer the following questions related to above case a) What form of misconduct is described in this case? Why is image manipulation unethical in scientific research? b) List two consequences of paper retraction. How does such misconduct affect public trust in science? Case 2: A principal investigator conducting clinical trials for a biotech company owned shares in the same company. This financial interest was not disclosed in the research publication. Later, regulatory authorities identified biased data interpretation favoring the company's product. a) What is meant by conflict of interest? Identify the type of COI involved in this case. b) Why is disclosure of COI important? Mention two consequences of non-disclosure of COI	[4] [3]
Q2	Answer the following question. a) How will you design your literature matrix for analyzing your literature search? Why it is important to document your literature search? b) Analyze the importance of retraction watch c) Justify that although the impact factor of a journal is an important criterion for judging quality, it is not an absolute measure of research quality. d) Analyze the importance of citation in scientific writing and explain the major citation styles used in research.	[2] [1] [2] [3]

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