

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

Make-up Examination-Nov-2025

COURSE CODE (CREDITS):18M11BT113 (3)

MAX. MARKS: 25

COURSE NAME: RESEARCH METHODOLOGY AND ETHICS

COURSE INSTRUCTORS: GSB AND HSD

MAX. TIME: 1 Hour 30 Min

Note: (a) All questions are compulsory.

(b) The candidate is allowed to make Suitable numeric assumptions wherever required for solving problems

Q.No	Question	Marks
Q1	<p>a) Design a checklist that researchers can use to improve the clarity and coherence of their research manuscripts. Why the discussion section is considered important in a research manuscript?</p> <p>b) What are the key characteristics of a well formulated hypothesis? How does a hypothesis guide research and experimentation?</p>	<p>[3]</p> <p>[3]</p>
Q2	<p>Answer the questions after analyzing cases given below</p> <p>Dr. Pasha, a researcher studying the effects of a new drug for hypertension, has received significant funding from a pharmaceutical company that manufactures the drug. In addition to this, Dr. Pasha owns stock in the company. During the study, Dr. Pasha publishes results indicating that the drug has significant positive effects on reducing blood pressure, with minimal side effects. Some colleagues raise concerns about whether Dr. Pasha's financial interests have influenced the study outcomes.</p> <p>a) What is the potential conflict of interest in Dr. Pasha's research? How could Dr. Pasha mitigate the conflict of interest in this situation?</p> <p>b) How could the financial relationship between Dr. Pasha and the pharmaceutical company affect the study's results?</p> <p>c) Evaluate the potential consequences of not addressing the conflict of interest in Dr. Pasha's research.</p>	[6]
Q3	How do ethical principles help in decision-making under the mentioned case study, where an anti-cancerous herbal drug from Podophylotoxin is to be carried out on adults, and aged people of 60 years and above for checking its efficacy? What decision model would you like to use for carrying out clinical trials? Do you think that ethical principles help under the prevailing set of conditions for making the right decision?	[5]
Q4	How can you adhere to the professional standards for following research ethics? How does data manipulation and plagiarism threaten the status of research? Explain with an example.	[4]
Q5	Which strategy would you like to follow for carrying out a Literature search on the topic of Green Technologies and its future? How does a systematic Literature review help in exploring the novel problem for research?	[2+2]