Assignment: A8

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Q1. Explain the importance of ethics in science and research? describe the key principles of Intellectual honesty & research integrity?

Ans1 ethics in science ensures trust, reproducibility, and societal benefit, preventing harm from falsified data or bias. It upholds public confidence and advances knowledge reliability.

Intellectual honesty: demands truthful reporting, acknowledging errors, and avoiding plagiarism or selective data presentation.

Research Integrity: Involves rigorous methodology transparent peer review, conflict of interest disclosure, ethical treatment of subjects, unbiased results.

Q2 Three main types of scientific misconduct How can it be prevented in academic & research environments? Differentiate between research misconduct and honest errors?

Ans2 Three main types of scientific misconduct:

1. Fabrication
2. falsification
3. plagiarism.

. Prevention in Academia:

1. Strict Institutional policies
2. Oversight mechanism
3. Proper mentorship & culture
4. Technology be used to avoid fraq.

Research misconduct is unintentional while honest mistake is intentional.

Q3 Write a detailed note on the role of insitutions in maintaining research integeity?

Ans3
1. Policy frame work
2. Education & training
3. Oversight & Infrastructure
4. Cultural reinforcement
5. Investigation & sanction.

Q4 What is redundant publication? Discuss the issue of duplicate & overlapping publications?

Ans Q4 when authors republish substantially similar data, text, findings across multiple papers without clear disclosure or justification.

. Types & issues:
1. Duplicate publication
2. Salami Slicing

Q5. Explain selective reporting and misinterpretation of data with suitable examples?

Ans5. a. Selective reporting :- occurs when researchers present favourable results.
b. Misinterpretation :- altering data presentations.

Example:
a. Clinical trial
1. p-hacking

b 1. Graph manipulation
2. Image falsification.