Question bank CIDT

UNIT3

Q.1) **What are the fundamental principles outlined in the codes of research ethics?**

Sol- Given the importance of ethics for the conduct of research, it should come as no surprise that many different professional associations, government agencies, and universities have adopted specific codes, rules, and policies relating to research ethics. Many government agencies, such as the National Institutes of Health (NIH), the National Science Foundation (NSF), the Food and Drug Administration (FDA), the Environmental Protection Agency (EPA), and the Department of Agriculture (USDA) have ethics rules for funded researchers. Other influential research ethics policies include the Uniform Requirements for Manuscripts Submitted to Biomedical Journals (International Committee of Medical Journal Editors), the Chemist's Code of Conduct (American Chemical Society), Code of Ethics (American Society for Clinical Laboratory Science) Ethical Principles of Psychologists (American Psychological Association), Statements on Ethics and Professional Responsibility (American Anthropological Association), Statement on Professional Ethics (American Association of University Professors), the Nuremberg Code and the Declaration of Helsinki (World Medical Association). The following is a rough and general summary of some ethical principals that various codes address*:

1. **Honesty**: Strive for honesty in all scientific communications. Honestly report data, results, methods and procedures, and publication status. Do not fabricate, falsify, or misrepresent data. Do not deceive colleagues, granting agencies, or the public.

2. **Objectivity**: Strive to avoid bias in experimental design, data analysis, data interpretation, peer review, personnel decisions, grant writing, expert testimony, and other aspects of research where objectivity is expected or required. Avoid or minimize bias or self-deception. Disclose personal or financial interests that may affect research.

3. **Integrity**: Keep your promises and agreements; act with sincerity; strive for consistency of thought and action.

4. **Carefulness**: Avoid careless errors and negligence; carefully and critically examine your own work and the work of your peers. Keep good records of research activities, such as data collection, research design, and correspondence with agencies or journals.

5. **Openness**: Share data, results, ideas, tools, resources. Be open to criticism and new ideas.

6. **Respect for Intellectual Property**: Honor patents, copyrights, and other forms of intellectual property. Do not use unpublished data, methods, or results without permission. Give credit where credit is due. Give proper acknowledgement or credit for all contributions to research. Never plagiarize.

7. **Confidentiality**: Protect confidential communications, such as papers or grants submitted for publication, personnel records, trade or military secrets, and patient records.

8. **Responsible Publication**: Publish in order to advance research and scholarship, not to advance just your own career. Avoid wasteful and duplicative publication.

9. **Responsible Mentoring**: Help to educate, mentor, and advise students. Promote their welfare and allow them to make their own decisions.

10. **Respect for colleagues**: Respect your colleagues and treat them fairly.

11. **Social Responsibility**: Strive to promote social good and prevent or mitigate social harms through research, public education, and advocacy.

12. **Non-Discrimination**: Avoid discrimination against colleagues or students on the basis of sex, race, ethnicity, or other factors that are not related to their scientific competence and integrity.

13. **Competence**: Maintain and improve your own professional competence and expertise through lifelong education and learning; take steps to promote competence in science as a whole.

14. **Legality**: Know and obey relevant laws and institutional and governmental policies.

15. **Animal Care**: Show proper respect and care for animals when using them in research. Do not conduct unnecessary or poorly designed animal experiments.

16. **Human Subjects Protection**: When conducting research on human subjects minimize harms and risks and maximize benefits; respect human dignity, privacy, and autonomy; take special precautions with vulnerable populations; and strive to distribute the benefits and burdens of research fairly.

17. There are many other activities that do not define as "misconduct" but which are still regarded by most researchers as unethical. These are called "other deviations" from acceptable research practices and include:
    ➢ Publishing the same paper in two different journals without telling the editors
    ➢ Submitting the same paper to different journals without telling the editors

- Not informing a collaborator of your intent to file a patent in order to make sure that you are the sole inventor
- Including a colleague as an author on a paper in return for a favor even though the colleague did not make a serious contribution to the paper
- Discussing with your colleagues confidential data from a paper that you are reviewing for a journal
- Trimming outliers from a data set without discussing your reasons in paper
- Using an inappropriate statistical technique in order to enhance the significance of your research
- Bypassing the peer review process and announcing your results through a press conference without giving peers adequate information to review your work
- Conducting a review of the literature that fails to acknowledge the contributions of other people in the field or relevant prior work
- Stretching the truth on a grant application in order to convince reviewers that your project will make a significant contribution to the field
- Stretching the truth on a job application or curriculum vita
- Giving the same research project to two graduate students in order to see who can do it the fastest
- Overworking, neglecting, or exploiting graduate or post-doctoral students
- Failing to keep good research records
- Failing to maintain research data for a reasonable period of time
- Making derogatory comments and personal attacks in your review of author's submission
- Promising a student a better grade for sexual favors
- Using a racist epithet in the laboratory
- Making significant deviations from the research protocol approved by your institution's Animal Care and Use Committee or Institutional Review Board for Human Subjects Research without telling the committee or the board
- Not reporting an adverse event in a human research experiment
- Wasting animals in research
- Exposing students and staff to biological risks in violation of your institution's biosafety rules

> ➢ Rejecting a manuscript for publication without even reading it
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> ➢ Sabotaging someone's work
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> ➢ Stealing supplies, books, or data
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> ➢ Rigging an experiment so you know how it will turn out
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> ➢ Making unauthorized copies of data, papers, or computer programs
>
> ➢ Deliberately overestimating the clinical significance of a new drug in order to obtain economic benefits

These actions would be regarded as unethical by most scientists and some might even be illegal. Most of these would also violate different professional ethics codes or institutional policies.

Q.2 How effective are current IPR laws in preventing copyright infringement in the digital age?

Sol- Intellectual property (IP) refers to ideas, inventions, and creativity of mind that had given the readiness of the public to grant the status of the property. World Intellectual Property Organization (WIPO) defined Intellectual property as creations of the mind, such as inventions, literary and artistic works, designs, symbols, names and images used in commerce (WIPO, https://www.wipo.int/about-ip/en/). Intellectual Property Rights (IPR) provides the right to the author for their creativity.

Unlike Fundamental Rights of citizens which are guaranteed by the Constitution of a country, IPRs are statutory rights enacted by the lawmaking authority in a country. Conventionally, many forms of IPRs are recognised. They are traditionally classified into two main categories:

> ➢ **Copyright and related rights:** i.e., rights granted to authors of literary and artistic works, and the rights of performers, producers of phonograms and broadcasting organizations. The main purpose of protection of copyright and related rights is to encourage and reward creative work. The distinguishing feature of this category of rights is that they protect only the tangible expression of an idea and not the idea itself. Further, these rights generally come into existence the moment a work is created and need not be registered with any central authority.
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> ➢ **Industrial property:** This category includes:
>   - ○ The protection of distinctive signs such as trademarks and geographical indications, and
>   - ○ Industrial property protected primarily to stimulate innovation, design and the creation of technology which are protected through laws on protection of inventions (patents), industrial designs and trade secrets.

Copyright is one of the significant parts of intellectual property rights. The major types of intellectual properties are:

> ➢ **Patents:** It is an exclusive right granted to an invention which is a product or a process that provides, in general, a new way of doing something, or offers a new technical solution to a problem (WIPO,https://www.wipo.int/patents/en/)

- ➢ **Industrial Designs:** Features of any shape, configuration, surface pattern, the composition of lines and colours applied to an article (www.copyright.gov.in/Documents/handbook.html)
- ➢ **Trademarks:** Itis a sign capable of distinguishing the goods or services of one enterprise from those of other enterprises by any mark, name, or logo (WIPO, https://www.wipo.int/trademarks/en/)
- ➢ **Copyright:** Expression of ideas in material form and includes thics and Intellectual literary, musical, dramatic, artistic, cinematography work, audio tapes, and computer software (www.copyright.gov.in)
- ➢ **Geographical Indications:** It is a sign used on products that have a specific geographical origin and possesses qualities or a reputation that are due to that origin (WIPO, https://www.wipo.int/ geo_indications/en/)

The IPRs covered by the TRIPS Agreement are:

- ➢ Copyright and related rights (i.e. the rights of performers, producers of sound recordings and broadcasting organizations)
- ➢ Trademarks, including service marks
- ➢ Geographical indications including appellations of origin
- ➢ Industrial designs
- ➢ Patents including the protection of new varieties of plants
- ➢ Layout-designs (topographies) of integrated circuits
- ➢ Undisclosed information, including trade secrets and test data

Q.3 How does proper citation enhance the credibility of a research paper?

Sol- This usually follows the Discussion and Conclusions sections. Its purpose is to thank all of the people who helped with the research but did not qualify for authorship (check the target journal's Instructions for Authors for authorship guidelines). Acknowledge anyone who provided intellectual assistance, technical help (including with writing and editing), or special equipment or materials.

A citation is both a signpost and an acknowledgement. As a signpost, it signals the location of your source. As an acknowledgement, it reveals that you are indebted to that source. A citation can appear in different formats: within the text (in-text citation) at the bottom of the page (footnotes), or at the end of the paper (endnotes). Different disciplines use different formats. The mechanics of citing are complicated, and vary in each format. To answer specific questions on the mechanics of citation, please consult sources describing each type. You may find it most useful to think about how citations function as a way for you as a writer to communicate with your reader. By using citations, you keep the reader always apprised of whose idea or words you are using at any given time in each sentence and in each paragraph. Three Reasons Why Citation is Important Citation is important because it is the basis of academics, that is, the pursuit of knowledge. In the academic endeavor, individuals look at evidence and reason about that evidence in their own individual ways. That is, taking what is already known, established, or thought, they use their reasoning power to create new