

Senior Design Ethics Practice Test (Sample)

Study Guide



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Questions

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- 1. What do copyrights protect?**
 - A. Ideas and concepts**
 - B. Expressions and original works**
 - C. Business methods**
 - D. Technical specifications**
- 2. Is the standard of truthfulness in professional settings the same as in everyday life?**
 - A. Yes, it is the same**
 - B. No, it differs**
 - C. Only when reporting to authorities**
 - D. It varies by profession**
- 3. Which of the following is deemed an ethical virtue in engineering?**
 - A. Honesty**
 - B. Self-interest**
 - C. Competition**
 - D. Negligence**
- 4. Who is responsible for issuing ownership of a patent?**
 - A. Federal officials only**
 - B. State officials only**
 - C. Both state and federal officials**
 - D. International bodies**
- 5. What characteristic must informed consent have?**
 - A. It must be universal for all**
 - B. It must be voluntary and informed**
 - C. It must be provided by authorities**
 - D. It can be bypassed in legal cases**
- 6. In the context of ethics, what is the role of accountability?**
 - A. To shift blame to others**
 - B. To deny responsibility**
 - C. To accept responsibility for one's actions and decisions**
 - D. To only report issues to upper management**

- 7. What defines Internal Whistleblowing?**
- A. Occurring without any approval**
 - B. Sharing information outside the organization**
 - C. Conveying information within the organization against pressures to remain silent**
 - D. Informing above one's level of authority only**
- 8. What are some limitations of ethical codes?**
- A. Clear definitions and guidelines**
 - B. Vague terminology and conflicts of interpretation**
 - C. Universally accepted principles**
 - D. Consistent application across all fields**
- 9. Whistleblowing is generally understood to involve what kind of action?**
- A. Reporting to a superior**
 - B. Informing outside parties**
 - C. Keeping information confidential**
 - D. Disciplining employees**
- 10. What do trademarks primarily protect?**
- A. Literature and music**
 - B. Goods and services**
 - C. Physical assets**
 - D. Inventions and designs**

Answers

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- 1. B**
- 2. B**
- 3. A**
- 4. B**
- 5. B**
- 6. C**
- 7. C**
- 8. B**
- 9. B**
- 10. B**

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Explanations

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1. What do copyrights protect?

- A. Ideas and concepts
- B. Expressions and original works**
- C. Business methods
- D. Technical specifications

Copyrights specifically protect expressions and original works that are fixed in a tangible medium. This includes literary works, music, art, and various forms of creative expression. The essence of copyright is to ensure that the creator of an original work has exclusive rights to its use and distribution, thereby encouraging creativity and innovation. While ideas and concepts may inspire original works, they do not receive copyright protection until they are expressed in a tangible form. Business methods and technical specifications may be protected by different types of intellectual property, such as patents, but they fall outside the scope of copyright law. Understanding this distinction is crucial, as it highlights the importance of the expression of ideas rather than the ideas themselves in the realm of copyright.

2. Is the standard of truthfulness in professional settings the same as in everyday life?

- A. Yes, it is the same
- B. No, it differs**
- C. Only when reporting to authorities
- D. It varies by profession

The standard of truthfulness in professional settings differs from that in everyday life due to the unique responsibilities and ethical obligations present in professional contexts. In professional environments, individuals often have heightened accountability to various stakeholders, including clients, employers, regulatory bodies, and the public. This means that professionals are expected to adhere to stricter guidelines and codes of conduct, which can require more rigor in ensuring that information is accurate and presented transparently. For instance, in fields such as law, medicine, or engineering, misrepresentation or failure to disclose certain information could lead to significant harm or legal repercussions. Therefore, professionals are required to maintain a level of integrity and honesty that may not always be expected or enforced in everyday personal interactions. In contrast, everyday life may allow for a broader interpretation of truthfulness, where social niceties or minor exaggerations can occur without the same level of consequence. This distinction is important as it underscores the need for professionals to maintain a higher standard of truthfulness to protect the interests of others and uphold the integrity of their field.

3. Which of the following is deemed an ethical virtue in engineering?

A. Honesty

B. Self-interest

C. Competition

D. Negligence

Honesty is widely regarded as a fundamental ethical virtue in engineering. This virtue is essential because it fosters trust and transparency in both professional relationships and public interactions. Engineers have a responsibility to provide accurate information, maintain integrity in their work, and uphold the standards of their profession. By being honest, engineers ensure that stakeholders, including clients, colleagues, and the community, can rely on their expertise and the safety of their designs and innovations. Honesty also encourages ethical decision-making and accountability, which are critical in preventing harm and ensuring that engineering solutions are not just technically sound but also socially responsible. In this way, honesty contributes to the overall ethical landscape of engineering practices, guiding professionals to act in the best interests of society while adhering to the principles and values of their profession.

4. Who is responsible for issuing ownership of a patent?

A. Federal officials only

B. State officials only

C. Both state and federal officials

D. International bodies

The correct answer to the question regarding who is responsible for issuing ownership of a patent is that it falls under the jurisdiction of federal officials only. In the United States, patents are granted by the United States Patent and Trademark Office (USPTO), which is a federal agency. This means that the authority to issue patents is centralized at the federal level and is governed by federal laws and regulations, making state officials or international bodies irrelevant in the patent issuance process. State officials do not have the jurisdiction or capability to issue patents, as patent law is uniform across the country and designed to foster innovation through a federal system that recognizes and protects inventors' rights. Therefore, the responsibility solely lies with federal officials.

5. What characteristic must informed consent have?

- A. It must be universal for all
- B. It must be voluntary and informed**
- C. It must be provided by authorities
- D. It can be bypassed in legal cases

Informed consent is a fundamental ethical principle that emphasizes the need for individuals to fully understand and voluntarily agree to participate in various situations, particularly those involving research, medical procedures, or any context where personal information or health is at stake. The correct characteristic of informed consent being that it must be voluntary and informed reflects the essence of respecting individual autonomy and ensuring that participants are not coerced or misled. Voluntary implies that the individual has the freedom to choose without pressure or undue influence, allowing them to make their own decisions. Informed means that the individual has been provided with all the relevant information about what participation entails, including potential risks, benefits, and alternatives. Together, these elements ensure that consent is meaningful and respects the dignity of individuals involved. Other characteristics, such as universality, do not align with the personal nature of informed consent, as individual circumstances and contexts vary greatly. Requirement by authorities is also not a defining characteristic, as consent must stem from the individual rather than be imposed. Finally, the notion that informed consent can be bypassed in legal cases undermines the principle of autonomy and the ethical obligation to inform individuals regarding their own treatment or participation in research. Therefore, the necessity for consent to be voluntary and informed is central to up

6. In the context of ethics, what is the role of accountability?

- A. To shift blame to others
- B. To deny responsibility
- C. To accept responsibility for one's actions and decisions**
- D. To only report issues to upper management

The role of accountability in the context of ethics is fundamentally about accepting responsibility for one's actions and decisions. It emphasizes that individuals and organizations must be answerable for the results of their behavior, the choices they make, and the outcomes that arise from those decisions. This concept is crucial in promoting trust and integrity within both personal and professional environments. Being accountable means recognizing the impact of one's actions on others and being willing to face the consequences, whether positive or negative. It fosters a culture where individuals feel empowered to act ethically, knowing they are responsible for their behavior. This acceptance of responsibility aligns with ethical principles, encouraging transparency and fostering a sense of trust among team members, stakeholders, and the wider community. In contrast, shifting blame, denying responsibility, or only reporting issues without taking further action does not align with the essence of accountability. Such behaviors can undermine ethical standards and trust, ultimately leading to detrimental consequences within an organization or community.

7. What defines Internal Whistleblowing?

- A. Occurring without any approval
- B. Sharing information outside the organization
- C. Conveying information within the organization against pressures to remain silent**
- D. Informing above one's level of authority only

Internal whistleblowing is defined by the act of conveying information within an organization, typically regarding unethical or illegal practices, despite pressures or fears of retaliation to remain silent. This form of whistleblowing focuses on reporting misconduct or wrongdoing to persons within the organization, such as supervisors or internal compliance departments, rather than going public or seeking external avenues. The emphasis on "internal" indicates that the whistleblower chooses to address the issue through the organization's established channels. The notion of facing pressures to stay silent is critical to the definition, as whistleblowers often confront significant risks, including job loss, harassment, or ostracism from colleagues. By acting to expose the wrongdoing internally, they aim to rectify the issues while minimizing damage to the organization and potentially triggering corrective actions. Other options do not capture the essence of internal whistleblowing. The first option suggests that there might be an absence of approval needed, which doesn't specifically relate to the act of reporting unethical behavior. The second option talks about sharing information outside the organization, clearly defining external rather than internal whistleblowing. The last choice focuses on informing someone higher up in authority, which is a narrow aspect of internal communication and does not encompass the broader concept of whistleblowing as a response to wrongdoing within the

8. What are some limitations of ethical codes?

- A. Clear definitions and guidelines
- B. Vague terminology and conflicts of interpretation**
- C. Universally accepted principles
- D. Consistent application across all fields

Ethical codes are designed to guide behavior and decision-making within various professions and contexts, but one notable limitation is the presence of vague terminology and potential conflicts of interpretation. This ambiguity can lead to different understandings of what the ethical guidelines mean in practice. When terms are not clearly defined, individuals may have varying interpretations based on their personal beliefs, cultural backgrounds, or situational contexts. This can result in inconsistent applications of the ethical standards, where the same situation might be viewed differently by different people, leading to confusion and possibly unethical outcomes. The existence of such disparities highlights the challenges in achieving a uniform understanding and application of ethical guidelines, which is critical in maintaining professionalism and trust. Consequently, while ethical codes aim to provide a framework for conduct, the vagueness can undermine their effectiveness and reliability in real-world applications.

9. Whistleblowing is generally understood to involve what kind of action?

- A. Reporting to a superior**
- B. Informing outside parties**
- C. Keeping information confidential**
- D. Disciplining employees**

Whistleblowing is primarily characterized by informing outside parties about unethical or illegal actions taking place within an organization. This often occurs when individuals feel that internal reporting channels are insufficient for addressing the wrongdoing, or when they believe that the issues being reported could pose harm to the public or to the organization itself if left unchecked. By choosing to go outside the organization, whistleblowers seek to ensure that the information reaches those who can take appropriate action, thereby promoting accountability and transparency. The other options do not encapsulate the essence of whistleblowing. Reporting to a superior typically involves internal communication and might not address the severity of the issue outside the organization's context, while keeping information confidential runs contrary to the act of whistleblowing, which relies on the disclosure of information. Disciplining employees is also unrelated to the act of whistleblowing, as whistleblowing is focused on exposing wrongdoing rather than enforcing organizational discipline.

10. What do trademarks primarily protect?

- A. Literature and music**
- B. Goods and services**
- C. Physical assets**
- D. Inventions and designs**

Trademarks primarily protect goods and services by allowing businesses to distinguish their products from those of others in the marketplace. This protection helps consumers identify the source of a product or service and ensures that they can make informed choices based on familiarity and trust. Trademark law prevents others from using the same or similar marks in a way that could cause confusion among consumers. In contrast to other forms of intellectual property, such as copyright, which protects original expressions in literature and music, or patent rights that cover inventions and designs, trademarks are specifically aimed at the branding aspect of commercial activities. This means that trademarks safeguard names, logos, slogans, and other identifiers that communicate the source of a good or service to the public. As a result, the primary function of trademarks is to promote fair competition, protect consumer interests, and uphold the integrity of brands in the marketplace.