



# ACE

## Engineering Academy

TEST ID: 604

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**ESE- 2019 (Prelims) - Offline Test Series**

**Test- 8**

**GENERAL STUDIES AND ENGINEERING APTITUDE**

### **SUBJECT: ETHICS AND VALUES IN ENGINEERING PROFESSION SOLUTIONS**

**01. Ans: (d)**

**Sol:** Engineer has to be sensitive to every ethical issue and resolve in an acceptable manner. Therefore statement 2 is wrong.

**02. Ans (a)**

**Sol:** Engineer shall not cause harm to public either intentionally or unintentionally. Lack of comprehensive perspective, an indicator of incompetence can cause unintentional harms also. Therefore, statement (2) is not a correct. Social justice is a political domain component but not a professional domain one. Engineer should always strive for fair distribution of resources through justice

**03. Ans: (a)**

**Sol:** Virtue ethics is the study of ethics by character. A professional's character and conduct of profession play important role than just opinions of the professional.

**04. Ans: (b)**

**Sol:** When a professional seeks personal benefits financial or in any other form for the job he/she is responsible for as part of duty, it is called conflict of interest.

**05. Ans: (b)**

**Sol:** A morally right employee responds in different ways to a situation that is felt to cause loss to public. It is expression of disobedience and includes resorting to protesting in addition to the others. Therefore, option (b) is not correct.

**06. Ans: (a)**

**Sol:** Both risk-benefit and cost-benefit approach work on most common good, the basis for utilitarian theory.



**07. Ans: (c)**

**Sol:** Duty theory is individual action based theory with focus on welfare of the society and hence it cannot be criticism.

**08. Ans: (d)**

**Sol:** All the three factors are pillars for establishing ethical conduct and good governance

**09. Ans: (d)**

**Sol:** Engineer should not pay anything extra other than the bonafide fees to get the work done. Engineers should not work in the areas where they lack confidence. Engineers have obligation to educate public about the benefits and risks involved in new technologies.

**10. Ans: (b)**

**Sol:** According to act utilitarian theory, an action taken, when results in good outcome, the action is deemed to be good even if the action is not correct. For instance, stealing food is correct if the stolen food is given to a hungry person.

**11. Ans: (b)**

**12. Ans: (c)**

**Sol:** If the engineer informs the organization then he puts his personal ethics above over loyalty to the current employer, which is not correct. So, he should not take the step mentioned in option (c)

**13. Ans: (c)**

**Sol:** Organizational code of ethics, also called Service Rules are contracts, become legally valid also and hence are more restrictive.

**14. Ans: (b)**

**Sol:** Engineered accidents are a consequence of improper or incomplete analysis of the project for potential threats and risks so that an appropriate and safer proper model can be developed in the design stage. Procedural accidents occur due to lapses in following the laid down procedures. Systemic failures are a consequence of lapses in the established systems. They are mostly due to complexities at the management level.

**15. Ans: (d)**

**Sol:** A professional is expected to enhance knowledge on a continuous basis once entering the profession. This is only obligation that is ought to be done. Hence, Statement (4) is not compulsory but highly desirable.



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**16. Ans: (b)**

**Sol:** Engineer is required to maintain confidentiality even after leaving the organization. An employee who retires from Army is required not to divulge sensitive information in public, in the national interest.

**17. Ans: (d)**

**Sol:** Engineer should be willing to compromise in terms of investing time, intellect, effort, involvement. Hence, option (b) is also correct. Remaining two options are self-explanatory.

**18. Ans: (d)**

**Sol:** Engineering projects are taken up with only partial knowledge or partial ignorance about the characteristics of materials or processes.

**19. Ans: (a)**

**Sol:** Disasters like Chernobyl, dangerous consequences of plastic, exploitation of limited natural resources like fossil fuels, and tempting advertisements in the name of consumerism are growing concerns that stress on the need for serious study of environmental ethics at all levels.

**20. Ans: (a)**

**Sol:** One of the ways accidents occur when procedures are not followed properly. This happens due to lack of competence or awareness. By providing proper training on procedures to be followed, such accidents can be prevented.

**21. Ans: (b)**

**Sol:** Almost every engineering project demands resources from the environment and also gives out byproduct which is a threat to the environment in some form or other. Therefore protection of environment is put in obligations of the professional societies. If protection of environment were mentioned as duty, environment could have been protected well.

**22. Ans: (a)**

**Sol:** Every engineering project is done to serve a specific purpose. But almost on all occasions, each such purpose has an inherent risk also that cannot be avoided completely. The above are examples of such inherent risks.

**23. Ans: (a)**

**Sol:** Cost of engineering products are never fixed by seeking opinion or taking consent of the public.



**24. Ans (b)**

**Sol:** Warning messages are issued out of moral concern for the public. Statement (1) is true since moral concern is not a mandatory act but only expected act.

An engineer is expected (ought) to enhance skills and knowledge which is a professional obligation. Hence Statement (2) is false

Incompleteness of activities to observe plans and drawings represents lapses in procedures. Statement (3) is true

Additional Investment in Safety is always rewarding in the long run. Hence statement (4) is false

**25. Ans: (c)**

**Sol:** Though the rule of gift specifies that an item offered can be treated as gift if the cost is lesser, it is not clear whether the offer fulfils other conditions of gift. Therefore (d) is not the answer. (a) and (b) are not the actions. Most acceptable action is given by (c).

**26. Ans: (c)**

**Sol:** Computer ethics is a sub-discipline of ethics that is concerned with the study of ethical issues relating to the use of computers.

**27. Ans: (a)**

**28. Ans: (c)**

**Sol:** Globalization of economies leads to exploitation of people or resources thus depriving the people of good living environment, leading to human rights violation. Only minima welfare measures are taken to safeguard the interests of the public and employees. Compared to developed nations, laws of developing nations are weak. MNCs, that are supposed to follow the most rigid laws, usually confine themselves to meeting the weakest set of laws thus violating the laws. Enough measures are normally not taken for safety of the employees as well as public. Therefore all the four are correct.

**29. Ans: (b)**

**Sol:** 1 and 2 represent the engineer's responsibility to the employer. 3 and 4 are commitment to the society and public and hence social responsibilities

**30. Ans: (c)**

**Sol:** Copying content from other sources and submitting as assignment that is a serious issue. Though rustication is a harsh punishment, there is likelihood of being awarded if the content is very sensitive and has serious consequences. However, the act



of the student is not a simple one to just warn and let off. Therefore the professor is not likely to take the action mentioned in the option (c)

**31. Ans: (b)**

**Sol:** Professional ethics are ethical issues that arise in the profession and the professional is required to resolve them with professional knowledge whereas personal ethics are concerned with resolving issues as an individual. Personal ethics affect an individual whereas professional ethics affect whole society. Therefore they are different. Every profession has different ethical issues to resolve and hence are not common. Statements 1 and 3 are not true.

**32. Ans: (d)**

**Sol:** Promoting participative decision making among employees improves the organizational ethics but not independent decisions. Statement (3) is not correct

**33. Ans: (d)**

**Sol:** Virtue ethics is criticized for what a person is rather than what one wants to become.

**34. Ans: (d)**

**Sol:** Objectivity eliminates subjective perspectives and encourages a process purely based on hard facts of a situation.

**35. Ans: (d)**

**Sol:** Loyalty to Employer is always below honesty, responsibility to the profession and public

**36. Ans: (c)**

**37. Ans: (c)**

**Sol:** Engineering ethics should develop the culture of identifying and developing the technologies that provide more employment opportunities. Engineer should exercise wisdom in using natural resources and should not exercise control over them. Hence 2 and 4 are not the purpose of studying engineering ethics.

**38. Ans: (b)**

**Sol:** Statement (3) is an act of disobedience rather than confidentiality

**39. Ans: (c)**

**Sol:** Managements investing on technology are considered visionary and hence are deemed to provide environment conducive to ethical conduct of office. Therefore 4 does not encourage unethical behaviour

**40. Ans: (a)**

**Sol:** All the three are the environmental ethics related issues called as tragedy of commons. It is the public's approach of overutilization of limited natural resources in the greed of getting richer.





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**41. Ans: (a)**

**Sol:** Public develops a belief system that experts may not be completely telling the truth since the assessments of experts have gone wrong sometimes, public is skeptical of the opinions expressed by experts. Therefore public does not always trust experts.

**42. Ans: (b)**

**43. Ans: (a)**

**Sol:** Advances in IT field are outperforming the pace with which humans are able to make laws and ethical codes. Therefore both the statements are true. However, to address the moral, social and ethical issues that computer technologies throw, human ability should improve.

**44. Ans: (d)**

**Sol:** In business model, focus is on profit. Therefore statement (I) is not true. Since business focuses on profit, there is always possibility of untested, incomplete or harmful products being developed.

**45. Ans: (c)**

**Sol:** Since safety is evaluated differently by different people depending on what is valuable to the individual, it is subjective. At the same time, the engineer addresses the risks in terms of safe working conditions,

better design etc., it is objective issue. Statement (1) is true. Almost all the codes of ethics stress on the importance of safety of the end user as well as environment, statement (2) is false

**46. Ans: (b)**

**47. Ans: (a)**

**Sol:** Categorical imperative means compulsory duty.

**48. Ans: (b)**

**49. Ans: (d)**

**Sol:** Becoming member of a professional body is not mandatory for engineers. One can practice professional without any professional body membership. This is not the case with the other three popular professions, viz., Medicine, Law and CA.

**50. Ans (c)**

**Sol:** An ethical engineer always conducts in the best interest of the public welfare. Ethical decisions taken are in the interest of public but it may cause inconvenience to public sometimes. Morals never encourage wrong steps. Hence, statement (II) is not correct.



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TOP 10  
10

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8

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TOP 10  
6

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