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VIVEKANANDHA COLLEGE OF ENGINEERING FOR WOMEN [AUTONOMOUS INSTITUTION AFFILIATED TO ANNA UNIVERSITY, CHENNAI] Elayampalayam – 637 205, Tiruchengode, Namakkal Dt., Tamil Nadu.



Question Paper Code: 5018

B.E. / B.Tech. DEGREE SUPPLEMENTARY EXAMINATIONS – FEB. / MAR. 2020 Third Semester

Computer Science and Engineering U15HS301- PROFESSIONAL ETHICS IN ENGINEERING

(Regulation 2015)

Time: Three Hours

Maximum: 100 Marks

Answer ALL the questions

PART - A

 $(10 \times 2 = 20 \text{ Marks})$

- 1. What is the method used to solve an Ethical problem?
- 2. Give the importance of Lawrence Kohlberg's and Carol Gilligan's theory?
- 3. What are the conditions required to define a valid consent?
- 4. Enumerate the roles of codes.
- 5. How will an engineer assess the safety?
- 6. What is the use of knowledge of risk acceptance to engineers?
- 7. Define Collegiality and loyality.
- 8. Differentiate External Whistle Blowing and Internal Whistle Blowing.
- 9. Give any four International rights suggested by Donaldson.
- 10. What are the characteristics of an engineer as an expert adviser in public planning and policy making?

PART - B

 $(5 \times 13 = 65 \text{ Marks})$

11. a) Enumerate the steps to resolve problems of disagreement in solving moral problems in Engineering Industries.

(OR)

- b) Categorize the three main levels of Moral developments related to engineering ethics, developed by Laurence-Kohlberg and Gilligan with suitable real time examples.
- 12. a) Exemplify the Challenger disaster to the public by assuming yourself as a politician.

(OR)

- b) Briefly list down the code of ethic for corporate members as per institution of engineers, India.
- 13. a) Discuss in detail about the effect of information on risk assessment. Explain what safety measures are to be taken to establish a nuclear power plant in a country with respect to Three Mile Island case study.

(OR)

- b) Deliberate about the Nuclear power plant reactor disaster at Chernobyl-give a line diagram and give some precautions to be followed that you consider as an important issue for the nuclear power plant reactor disaster.
- 14. a) Illuminate the different types of employer's authority that are to be respected by the engineers while undergoing projects as a team.

(OR)

- b) Label the term Collective Bargaining. Highlight the role of collective bargaining in workplace rights and responsibilities.
- 15. a) Express how the sample code of ethics serves as a model guide for professional conduct for an individual as well as for a team of professionals in any field.

(OR)

b) Considered the disaster at Bhopal and Chernobyl Nuclear Plant explosion that have caused long term environmental effects. It is difficult to assess long-range changes in the climate due to the "green house effect" and "depletion of Ozone layer". Justify.

PART - C

 $(1 \times 15 = 15 \text{Marks})$

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-16. a) Relate the weapon development in the world and Engineers involvement in weapon development, as a global issue.

(OR)

b) Express your impression about "Computer Ethics" as applicable to technological society by 2020.