

Unit-1: Introduction to Philosophy of Engineering

1. What are all stages of engineering history? Briefly explain the historical development of engineering.
2. What is the important Point of view of STEAM? A Brief Overview of STEAM Education.
3. Brief explanation about the issues, challenges and opportunities for engineering development.
4. What are the basic qualities of a successful engineer in any field? List out the Characteristics of a Successful Engineer.
5. Why is an engineering mindset important? What are the 6 engineering habits of mind?

Unit-2: Ontology of Engineering

1. Detailed comparisons of Reference Ontology and Application Ontology.
2. Briefly explain the Suites of Ontology Modules and its parameters.
3. Explain the functions and Capabilities of Ontology
4. Briefly explain the product life cycle with the help of flow chart and time vs sales graph.

Unit-3: Epistemology of Engineering

1. What is the RIASEC model used for? And explain all the modules.
2. List out the Four Dimensions of Engineering and briefly explain the engineering dimensions.
3. Explain the Epistemology of Engineering Design concept.

Unit-4: Methodology of Engineering

1. What are all the differences between scientific method and the engineering design process with the help of flow chart?
2. What is the ADDIE learning model? Elaborate all the steps.
3. What is the full form of CDIO and briefly explain the process.
4. What are the 7 steps of engineering design process?
5. What is implementation and operation?
6. What are various factors in operating system design and implementation considerations?

Unit-5: Axiology of Engineering

1. Explain engineers & society. How do engineers contribute to the society and the community?
2. What is the engineering code of ethics?
3. What are the important constraints of Socio-Politics in Technology & Engineering
4. Explain the term sustainability and diversity. Define Engineer's role to achieve Sustainable Development.
5. What do you think is the best organization for engineering society? What is the main purpose of the professional engineering organization?