

**VIT**

Vellore Institute of Technology

Final Assessment Test – November 2019

Course: MEE1009 - New Product Development

Class NBR(s): 7311

Time: Three Hours

Slot: D1

Max. Marks: 100

KEEPING MOBILE PHONE/SMART WATCH, EVEN IN 'OFF' POSITION, IS EXAM MALPRACTICE**PART – A (4 X 10 = 40 Marks)****Answer ALL Questions**

1. What is product architecture? How a product can be represented? Differentiate between modular and integrated product architecture with example.
2. What is a patent? Write short notes on trademark, trade secret and copy right.
3. What is the methodology of TRIZ? Briefly explain the contradiction theory of TRIZ principle.
4. Discuss the importance of industrial design in a new product development. What are the product types from industrial design perspective? At what stage of the new product development stage does the role of industrial designer begin?

PART – B (4 X 15 = 60 Marks)**Answer any FOUR Questions**

5. Elaborate the steps of concept generation for a hand held roofing nailer.
6. What is a product life cycle? How it influences the new product development? Draw the product life cycles of (a) VCR-Video cassette recorder (b) mobile phone (c) Television.
7. What is an opportunity and what are the two dimensions of opportunity identification? Discuss the uncertainty horizons with a pictorial representation.
8. Elaborately discuss the guidelines to interpret raw data in terms of customer needs using the example of a thermostat.
9. What is Design for Environment (DFE)? Explain the two life cycles that are the basis of DFE. Draw the flow chart showing the DFE throughout the product development process.

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