## Enrolment No. **GUJARAT TECHNOLOGICAL UNIVERSITY** M. E. - SEMESTER - II • EXAMINATION - SUMMER • 2014 Date: 20-06-2014 Subject code: 1725003 **Subject Name: Product Development and Innovation** Time: 02:30 pm - 05:00 pm **Total Marks: 70 Instructions:** 1. Attempt all questions. 2. Make suitable assumptions wherever necessary. 3. Figures to the right indicate full marks. Q.1 **(a)** What is product development? why it is required and give its usefullness 07 What do you mean by organization ? Compare the characteristics of project 07 **(b)** based organization and function based organization. Explain in brief the product planning process. 07 Q.2 **(a)** How the final specifications are set in product development process? **(b)** 07 OR List the causes of failure of new product and justify the statement õIncorrectly (b) 07 placed, priced and advertised new product generally leads to failure in market.ö Q.3 Write the various steps for identifying customer needs and discuss the different 07 **(a)** techniques used for collecting raw data from customer. Discuss the phenomenon of functional decomposition **(b)** and product 07 decomposition in concept generation process. OR How industrial design is important to a product ? Also write its aesthetic needs. Q.3 07 **(a)** What would be the relative advantages and disadvantages of involving actual **(b)** 07 customers in the concept generation process ? List and explain the various steps in concept testing process. Q.4 07 **(a)** Describe the screening & scoring stages in concept selection process with a 07 **(b)** suitable example. OR **Q.4** Define and discuss the concept of TRIZ and give its applications in product 07 **(a)** design and development. Explain the concept of QFD with a case study of Zerox ó photo copier machine 07 **(b)** at least for five customerøs requirement. Q.5 Which are the different types of property ? Explain the intellectual property 07 **(a)** relevant to product design and development. Write and discuss the different survey formats in concept testing process with 07 **(b)** example. OR Q.5 **(a)** Explain the overview of a patent by giving a sample of patent. 07 Which are the government regulations for design for environment. 07 **(b)** \*\*\*\*\*