Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

ME – SEMESTER II (NEW) – • EXAMINATION – SUMMER 2016

Subject Code: 2725003

Subject Name: Product Development and Innovation

Date: 27/05/2016

Time:10:30 am to 01:00 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) List the various phases in product development process and explain all in detail.
 07
 (b) Define Specifications and explain the process of establishing target
 07
 - specifications.
- Q.2 (a) Explain the different challenges in Product development process. 07
 - (b) List the causes of failure of new product and justify the statement "Incorrectly 07 placed, priced and advertised new product generally leads to failure in market."

OR

- (b) Write the various steps for identifying customer needs and discuss the different 07 techniques used for collecting raw data from customer.
- Q.3 (a) How industrial design is important to a product ? Also write its aesthetic needs. 07
 - (b) What would be the relative advantages and disadvantages of involving actual 07 customers in the concept generation process ?

OR

- Q.3 (a) Discuss the Screening and Scoring stage in concept selection process. 07
 - (b) Write and discuss the different survey formats in concept testing process with 07 example.
- Q.4 (a) Discuss the phenomenon of functional decomposition and product 07 decomposition in concept generation process.
 - (b) Define and discuss the concept of TRIZ and give its applications in product 07 design and development.

OR

- Q.4 (a) Which are the different types of property ? Explain the intellectual property 07 relevant to product design and development.
 - (b) Explain the concept of QFD with a case study of Zerox photo copier machine 07 at least for five customer's requirement.
- Q.5 (a) What are the inventive problems. Also explain the five levels of solution. 07
 - (b) Explain the different types of product development project and give the reasons07 for poor development planning.

OR

- Q.5 (a) Discuss the patent search process briefly and the give the details contained in 07 patent by giving the patent sample.
 - (b) List and explain the various steps in concept testing process. 07
