

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VI (NEW) - EXAMINATION – SUMMER 2018

Subject Code:2161502

Date:01/05/2018

Subject Name:Product Development & Value Engineering

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) What is product design? **03**
(b) Discuss good product design characteristics. **04**
(c) Explain product design process. **07**
- Q.2** (a) What is product development? **03**
(b) Give product classification with example. **04**
(c) How will you select material for a product? Explain. **07**
- OR**
- (c) Explain role of market research in product design. **07**
- Q.3** (a) What is process design? **03**
(b) Write note: new materials in product design **04**
(c) Discuss principles of ergonomics in product design process. **07**
- OR**
- Q.3** (a) What is feasibility study? **03**
(b) Write note: standardization in product design. **04**
(c) What are objectives of human engineering? **07**
- Q.4** (a) What is value engineering? **03**
(b) Write note: process selection criteria **04**
(c) Discuss importance of value engineering in industry. **07**
- OR**
- Q.4** (a) How is VE a cost reduction technique? **03**
(b) Write note: role of creativity in VE. **04**
(c) Discuss various phases of VE. **07**
- Q.5** (a) What are the limitations of VE? **03**
(b) What is a VE job plan? Explain. **04**
(c) Explain various values used in VE with examples. **07**
- OR**
- Q.5** (a) Why do product design and VE work simultaneously? **03**
(b) Write note: FAST diagram. **04**
(c) Explain primary and secondary functions of (1) cell phone, (2) water cooler in VE terms. **07**