

GUJARAT TECHNOLOGICAL UNIVERSITY**BE- SEMESTER-VI EXAMINATION – WINTER 2025****Subject Code:3161916****Date:21-11-2025****Subject Name:Product Development and Entrepreneurship****Time:02:30 PM TO 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.
4. Simple and non-programmable scientific calculators are allowed.

		MARKS
Q.1	(a) Differentiate the managerial and entrepreneur approach	03
	(b) Write a detailed short Note on Product life cycle.	04
	(c) Explain characteristics of product development process.	07
Q.2	(a) List out challenges face by product development process.	03
	(b) Justify the statement “Allocate Resources and Plan Timing plays significant role for product planning”.	04
	(c) Explain the common customer needs which should be known.	07
	OR	
Q.3	(c) Explain the Importance of elements in product planning process.	07
	(a) What is Module heuristics? State its applications	03
	(b) Explain the role of entrepreneurs in economic development.	04
	(c) What is feasibility study? Explain financial feasibility and technical feasibility by taking suitable example.	07
	OR	
Q.3	(a) What is business plan? Enlist the key component of business plan	03
	(b) Explain the characteristics required for successful entrepreneur	04
	(c) What is industry analysis? Explain the porters five force model for industry analysis	07
Q.4	(a) What is product modularity? Explain the modularity design in brief	03
	(b) Explain market mix(4Ps)	04
	(c) What is the Design evaluation process? Explain Design for assembly in detail	07
	OR	
Q.4	(a) Write advantages of 3D printing	03
	(b) Which contents are required to include in product specification	04
	(c) What is the product evaluation process? Explain the Design for manufacturing in detail	07
Q.5	(a) Enlist the steps for preparing market plan	03
	(b) Write short note on break even analysis	04
	(c) What is Performa income statement? Explain Performa cash flow and balance sheet in financial plan	07
	OR	
Q.5	(a) Answer the following questions	03
	1) Which one is NOT a part of 4Ps (Market Mix) a) Product b) Price c) Promotion 4) Packaging	
	2) Intellectual property right (IPR) in India covers a) Patents b) Copyrights c) Trademarks 4) All of the above	

3) Assign True (T) or False (F) for following statement.

“Patent is granted for innovation or improvement in invention”

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|------------|---|-----------|
| (b) | Differentiate between licensing and franchising | 04 |
| (c) | Write short note on legal issues related to product development and entrepreneurship: | 07 |

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GUJARAT TECHNOLOGICAL UNIVERSITY

BE- SEMESTER-VI (NEW) EXAMINATION – WINTER 2024

Subject Code:3161916

Date:02-12-2024

Subject Name:Product Development and Entrepreneurship

Time:02:30 PM TO 05:00 PM

Total Marks:70

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
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4. Simple and non-programmable scientific calculators are allowed.

		MARKS
Q.1	(a) Write advantages of Reverse Engineering.	03
	(b) Define product development? Give four example of product	04
	(c) Explain characteristics of successful product development.	07
Q.2	(a) Why customer need is very important for product development process?	03
	(b) Describe briefly the phases of product life cycles.	04
	(c) Explain opportunity identification process.	07
	OR	
	(c) Describe the various methods used to determine customer need importance.	07
Q.3	(a) Enlist the steps required to target the product specifications.	03
	(b) Write importance of designing for maintenance.	04
	(c) Explain virtual prototyping with an example of CAD.	07
	OR	
Q.3	(a) Write advantages of 3D Printing.	03
	(b) How is the design for assembly (DFA) methodology important to minimize the cost of assembly? Explain briefly.	04
	(c) What is product modularity? Explain various types of product modularity.	07
Q.4	(a) What do you mean by creative problem solving?	03
	(b) Explain role of entrepreneurship in economic development.	04
	(c) Differentiate between managerial v/s entrepreneurial approaches.	07
	OR	
Q.4	(a) Define Entrepreneur and Entrepreneurship.	03
	(b) What is the importance of e-commerce technology for entrepreneurs?	04
	(c) What is Performa balance sheet? How the breakeven analysis is useful for new venture?	07
Q.5	(a) How the financial planning can be done by entrepreneur for the new venture?	03
	(b) Why man power planning is important in entrepreneurial business.	04
	(c) Write steps in preparing a marketing plan with appropriate flow chart.	07
	OR	
Q.5	(a) Discuss working capital.	03
	(b) Describe in detail the importance of feasibility study for a new venture.	04
	(c) Describe in details the terminology related with intellectual property rights (i) trademarks (ii) trade secrets (iii)copyrights	07

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		MARKS
Q.1	(a) Differentiate between managerial vs. entrepreneurial approach	03
	(b) What is Product life cycle? Explain each stage with example.	04
	(c) List the various phases in product development process and explain all in detail.	07
Q.2	(a) Types of methods for Generating New Ideas	03
	(b) Define the term: (i) Function and worth (ii) Economic value and Aesthetic value	04
	(c) Write and discuss the different survey formats in concept testing process with example	07
	OR	
	(c) Write short note on product planning.	07
Q.3	(a) Which are the different Sources of New Ideas	03
	(b) Definition: (i) Political Value and Social Value (ii) Plan value and Time value	04
	(c) How industrial design is important to a product? Also write its aesthetic needs	07
	OR	
Q.3	(a) Characteristics of Venture Capital as a source of financing.	03
	(b) Role and Importance of Commercial Banks in India	04
	(c) What are the inventive problems? Also explain the five levels of solution.	07
Q.4	(a) Write full name (i) SEBI (ii) EPFO (iii) NBFC	03
	(b) Explain the following: a) Product Life Cycle b) IPR c) Residual stress d) Decision Tree	04
	(c) Explain the different types of product development project and give the reasons for poor development planning.	07
	OR	
Q.4	(a) What is an inventive problem?	03
	(b) How Brainstorming plays a vital role in generating new Ideas?	04
	(c) Discuss the patent search process briefly and the give the details contained in patent by giving the patent sample.	07
Q.5	(a) Write a short note on Human Factors considered in Design of the Product	03
	(b) What do you mean by creative thinking? Elaborate the role of these techniques in proper product development.	04
	(c) What would be the relative advantages and disadvantages of involving actual customers in the concept generation process?	07
	OR	
Q.5	(a) Explain the following (a) Overhead cost (b) TRIZ (c) Market Research	03

- (b)** Explain the importance of different feasibility study for any Organization to start new business. **04**
- (c)** List the causes of failure of new product and justify the statement “Incorrectly placed, priced and advertised new product generally leads to failure in market.” **07**

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VI(NEW) EXAMINATION – WINTER 2022****Subject Code:3161916****Date:16-12-2022****Subject Name:Product Development and Entrepreneurship****Time:02:30 PM TO 05:00 PM****Total Marks:70****Instructions:**

1. Attempt all questions.
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4. Simple and non-programmable scientific calculators are allowed.

MARKS

- Q.1**
- | | | |
|-----|--|-----------|
| (a) | Define product development? Give four example of product development. | 03 |
| (b) | Describe briefly the phases of product life cycles. | 04 |
| (c) | Define product planning. Explain the product planning process in detail. | 07 |
- Q.2**
- | | | |
|-----|---|-----------|
| (a) | Why affinity diagrams are used for product planning? | 03 |
| (b) | Explain briefly the concept of reverse engineering for product development. | 04 |
| (c) | How the manufacturing costs of product are decided in DFM methodology? Explain in detail. | 07 |
- OR**
- | | | |
|-----|--|-----------|
| (c) | Describe the various methods used to determine customer need importance. | 07 |
|-----|--|-----------|
- Q.3**
- | | | |
|-----|---|-----------|
| (a) | Enlist the steps required to target the product specifications. | 03 |
| (b) | How is the design for assembly (DFA) methodology important to minimize the cost of assembly? Explain briefly. | 04 |
| (c) | What is product modularity? Explain various types of product modularity. | 07 |
- OR**
- Q.3**
- | | | |
|-----|---|-----------|
| (a) | What is design for maintainability of the product? | 03 |
| (b) | Explain free-form fabrication method (additive manufacturing) as a prototyping technique. | 04 |
| (c) | Describe the function analysis approach used for product development. | 07 |
- Q.4**
- | | | |
|-----|---|-----------|
| (a) | Enlist characteristics required for successful entrepreneurs. | 03 |
| (b) | Differentiate between managerial v/s entrepreneurial approaches. | 04 |
| (c) | How the marketing plan for the new venture can be prepared? Describe with detail steps. | 07 |

OR

Q.4	(a)	Enlist the factors impacting emergence of entrepreneurship.	03
	(b)	Explain role of entrepreneurship in economic development.	04
	(c)	What is Performa balance sheet? How the break even analysis is useful for new venture?	07
Q.5	(a)	How the manpower planning is important for entrepreneur?	03
	(b)	Describe in detail the importance of feasibility study for a new venture.	04
	(c)	What is patent? Explain in detail about design and utility patents.	07

OR

Q.5	(a)	How the financial planning can be done by entrepreneur for the new venture?	03
	(b)	Enlist the necessary steps have to be followed by an entrepreneur while drawing a business plan.	04
	(c)	Describe in details the terminology related with intellectual property rights (i) trademarks (ii) trade secrets (iii) franchising.	07
