



## DEPARTMENT OF MECHANICAL ENGINEERING

### Subject: Industrial Product Design

**1-The following is the preliminary stage of Production planning**

- (A) Capacity planning
- (B) Material requirements planning
- (C) Scheduling
- (D) Product development and design

**2-The following is the source(s) for developing new or improved product**

- (A) Research and Development department of the enterprise
- (B) Consumer suggestions and Complaints
- (C) Other competitive products in the market
- (D) All of the above

**3-Product cost can be reduced by considering the following aspect(s) at the design stage**

- (A) Minimum number of operations
- (B) Unnecessary tight tolerance should not be provided
- (C) Design should consist of standard parts
- (D) All of the above

**4-The ultimate objective of the product is**

- (A) To provide a new look
- (B) Utilizing existing manpower
- (C) To monopolize the market
- (D) All of the above

**5-Based on their field of application, manufactured goods can be classified as**

- (A) Primary, Secondary and Tertiary
- (B) Consumer, Capital and Defense
- (C) Essential, Market and Standard
- (D) Primary, Luxury and Consumer

**6-The following aspect of product is concerned with the ease and efficiency of the product performance**

- (A) Functional aspect
- (B) Operational aspect
- (C) Durability aspect
- (D) Aesthetic aspect

**7-The “simplicity to operate and easy to understand” of product is concerned with its following aspect**

- (A) Functional aspect
- (B) Operational aspect
- (C) Durability aspect
- (D) Aesthetic aspect

**8-\_\_\_\_\_ helps in establishing the interchangeability of products**

- (A) Standardization
- (B) Simplification
- (C) Diversification
- (D) Specialization

**9-In which of the following type the manufacturing cost may go up**

- (A) Standardization
- (B) Simplification
- (C) Diversification
- (D) All of the above

**10-Product \_\_\_\_\_ is the ultimate objective of variety reduction**

- (A) Simplification
- (B) Standardization
- (C) Specialization
- (D) All of the above

**11-The following eases the process of stock control**

- (A) Standardization
- (B) Simplification
- (C) Both ‘A’ and ‘B’
- (D) None of the above

**12-The following is the Durability aspect(s) of a product**

- (A) Efficiency of the product
- (B) Easy to understand
- (C) Ease with which a product can be maintained
- (D) All of the above

**13. Which of the following processes are simplified by designing a product for ease of assembly?**

- a. Service
- b. Recycling

- c. Manufacturing
- d. All of the Above

**14. Hinges can be incorporated in many plastics parts if it has**

- a. Hard plastic
- b. Flexible plastic
- c. Thin wall section
- d. both b&c

**15. In which of the following materials can integral springs be incorporated?**

- a. Wood**
- b. Metal
- c. Plastic
- d. both b &c

**16. Processes that allow very complex parts that result when separate parts are combined into one are**

- a. Injection molding
- b. Turning
- c. Investment casting
- d. both a &c

**17. Which among the following rivets cannot be hopper-fed, inserted, and set automatically on inexpensive equipment?**

- a. Tubular
- b. Semi-tubular
- c. Solid
- d. Eyelets

**18. Life-cycle engineering is also called**

- a) green design
- b) expensive design
- c) easy design
- d) none of the mentioned

**19. Designs are periodically modified to**

- a) improve product performance
- b) strive for zero-based rejection and waste
- c) make products easier and faster to manufacture
- d) all of the mentioned

**20. \_\_\_\_\_ is the development of original products, product improvements, product modifications, and new brands through the firm's own R&D efforts.**

- a. Idea generation
- b. Concept testing
- c. Test marketing
- d. New product development

**21. All of the following are different ways a firm can obtain new products, except which one?**

- a. By acquiring a whole new company
- b. A firm can obtain a new product through patents
- c. A firm can obtain a new product by licensing someone else's new product
- d. A firm can obtain a new product by using the R&D department of other firms in the same industry.

**22. All of the following are accurate descriptions of reasons why new products fail, except which one?**

- a. Although the market size was correctly estimated, the product idea itself was not good.
- b. The actual product was not designed as well as it should have been.
- c. The new product was priced too high.
- d. The new product was advertised poorly.

**23. All of the following are accurate descriptions of ways companies are anxious to learn how to improve the odds of new-product success, except which one?**

- a. Find out what successful new products have in common.
- b. To learn lessons from new product failures.
- c. Companies have to learn to understand their own consumers.
- d. Do not overly rely on product innovation when you can succeed by copying others.

**24. New-product development starts with \_\_\_\_\_.**

- a. idea screening
- b. idea generation
- c. concept development and testing

d. marketing strategy development

**25. \_\_\_\_\_ is the systematic search for new-product ideas.**

- a. Idea generation
- b. Idea screening
- c. Concept development and testing
- d. Marketing strategy development

**26-‘Ergonomics’ is related to human**

- a. Comfort
- b. Safety
- c. Both ‘a’ and ‘b’
- d. None of the above

**27-The following subject(s) is (are) related to ‘Ergonomics’**

- a. Anthropology
- b. Physiology
- c. Psychology
- d. All of the above

**28-The qualitative information is one which concerns the**

- a. value of some variable
- b. Rate of change
- c. Condition or status of a system
- d. Presence or absence of some specific object

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- a. value of some variable
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**30-Ergonomics principle suggests that**

- a. Monitoring displays should be placed outside peripheral limitations
- b. Glow-in-the dark dials made of reflective substances are good for viewing in the nights
- c. Visual systems should be preferred over auditory systems in noisy locations
- d. All of the above

**31-The following is (are) basic type(s) of dynamic quantitative display(s)**

- a. Fixed scale with moving pointer
- b. Fixed pointer with moving scale

- c. Counters displays
- d. All of the above

**32-In designing an efficient workspace, the left hand will cover**

- a. Maximum working area
- b. Normal working area
- c. Minimal working area
- d. Any of the above

**33-The most frequently used components are arranged in**

- a. Left side
- b. Right side
- c. Central location
- d. Any of the above

**34-The height of the top of the work bench should be \_\_\_ the height of the elbow of the workmen.**

- a. at
- b. Above
- c. Below
- d. Any of the above

**35-For controlling the rotation through more than 360 degree, we use**

- a. Knob
- b. Selector
- c. Crank
- d. Wheel

**36-If natural light is used as the principal means of illumination at workspace, windows area needs to be equal to \_\_\_ percent of floor area.**

- a. 20
- b. 30
- c. 40
- d. 50

**37-The working area should be illuminated \_\_\_\_\_ their surroundings.**

- a. More than
- b. Less than
- c. Equal to
- d. Depends upon type of job performed

**38. The safe exposure limits for noise levels for 08 hours of working/day is**

- a. 90 dBA
- b. 110 dBA
- c. 130 dBA
- d. 150 dBA

**39-The international limits for chemical substances in air is known as**

- a. Maximum limit value
- b. Minimum limit value
- c. Optimum limit value
- d. Threshold limit value

**40-The following are the principles in the application of Anthropometric data except**

- a. Design for extreme individuals
- b. Design for the average
- c. Design for adjustable range
- d. Design for the optimum

**41-The correct sequence of development of Anthropometric considerations in design step by step, is**

- a. Decide the user population – Decide the relevant body measurement – Determine the applicable principle – Decide the percentage of population
- b. Decide the relevant body measurement – Decide the user population –Determine the applicable principle – Decide the percentage of population
- c. Decide the user population – Decide the relevant body measurement – Decide the percentage of population – Determine the applicable principle
- d. Decide the user population – Determine the applicable principle – Decide the relevant body measurement – Decide the percentage of population

**42-The following is (are) the Biomechanical principle(s) in ergonomics**

- a. The joints should be kept as far as possible in a neutral position
- b. Keep the work close to the body
- c. The lifting must occur gradually in an even matter
- d. All of the above

**43-The following principle(s) is (are) used to calculate the energy requirements on the hearts and lungs as a result of muscular effort during movements**

- a. The Biomechanical Principles
- b. Physiological Principles
- c. Anthropometric Principles
- d. All of the above

**44-The people can carry out continuous task without fatigue if the energy requirement for the task is less than \_\_\_\_\_ .**

- a. 250Watt
- b. 500 Watt
- c. 750Watt
- d. 1000Watt

**45-For longer seating, the most comfort position for the leg is when knee is bent at about \_\_\_\_\_ degree.**

- a. 25
- b. 35
- c. 45
- d. 55

**46.Probability of the event that might occur X Severity of the event if it occurs =**

- (A) Accident
- (B) Hazard
- (C) Risk
- (D) None of the above

**47-Industrial safety management is that branch of management which is concerned with \_\_\_\_\_ hazards from the industries.**

- (A) Reducing
- (B) Controlling
- (C) Eliminating
- (D) All of the above

**48-The following is indirect cost of accident**

- (A) Money paid for treatment of worker
- (B) Compensation paid to worker
- (C) Cost of lost time of injured worker
- (D) All of the above



**49-The following is(are) physical hazard agent(s)**

- (A) Falls
- (B) Electricity
- (C) Inhalation
- (D) All of the above

**50-Check list for Job Safety Analysis (JSA) consists of**

- (A) Work area, material, machine, tools
- (B) Men, machine, material, tools
- (C) Men, machine, work area, tools
- (D) Men, work area. Material, tools

**51-A safety programme consists of**

- (A) Three E's
- (B) Four E's
- (C) Five E's
- (D) Six E's

**52.For household wiring and small units, the following should be used for safety measure**

- (A) MCB
- (B) ACB
- (C) OCB
- (D) MCCB

**53.-Which of the following colour is used for radiation hazard?**

- (A) Red
- (B) Orange
- (C) Green
- (D) Purple

**54-The following is (are) are generally provided with limit switch to prevent motion beyond preset limit**

- (A) Hoists
- (B) Conveyors
- (C) Machine tables
- (D) All of the above

**55-The following is (are) used as safety device(s) in machines**

- (A) Fail safe

- (B) Safety interlocks
- (C) Limit switches
- (D) All of the above

**56-Class-A fire consists of fire due to**

- (A) Wood
- (B) Oil
- (C) Transformer
- (D) Chemical

**57-Water is used to extinguish**

- (A) Class-A fires
- (B) Class-B fires
- (C) Class-C fires
- (D) All of the above

**58-The following class of fire occur in electrical equipment**

- (A) Class-A fires
- (B) Class-B fires
- (C) Class-C fires
- (D) All of the above

**59-The following extinguisher is suitable for cotton or other textile fire**

- (A) Water
- (B) Soda acid
- (C) Foam
- (D) Dry chemicals

**60-\_\_\_\_\_ is best suited to extinguishing oil or flammable liquid fire.**

- (A) Soda acid
- (B) Vaporizing liquid
- (C) Foam
- (D) Dry chemical

**61. “The concept of the marketing mix was developed by -----.**

- a. N. H. Borden
- b. Philip Katter
- c. Stanton
- d. W. Anderson

**62. “Many people want BMW, only few are able to buy” this is an example of ...**

- a. Need
- b. Want
- c. Demand

d. Status

**63. .... is the act of obtaining a desired object from someone by offering something in return.**

- a. Marketing Myopia
- b. Selling
- c. Exchange
- d. Delivery

**64. It's a combination of quality, service & price**

- a. Marketing Triad
- b. Customer Value Triad
- c. Customer Satisfaction Triad
- d. Service Quality Triad

**65. .... model is highly firm centric, where the firm believes that the competitive edge lies in its ability to innovate.**

- a. Conventional
- b. Contemporary
- c. Competitive
- d. None of the above

**66. "Marketing is the activity, set of ..... & processes for creating, communicating, delivering & ..... offerings that have value for customers, clients, partners & society."**

- a. Institutions, satisfying
- b. Organizations, exchanging
- c. Institutions, exchanging
- d. Organizations, understanding

**67. .... Involves purchase from various sources & assembled at one place – involves creation & maintenance of the stock of goods purchased & ..... Involves transfer of ownership of the goods**

- a. Selling & Buying
- b. Assembling & Selling
- c. Buying & Assembling
- d. Assembling & Buying

**68. ....are the form of human needs take as shaped by culture & individual personality.**

- a. Wants
- b. Demands
- c. Needs
- d. Social Needs

**69. .... is want for specific product backed by on ability to pay**

- a. Demand
- b. Need
- c. Want
- d. Customer

**70. This of the following is not a type of Marketing Concept:**

- a. The production concept
- b. The selling concept
- c. The societal marketing concept
- d. The Supplier Concept

**71. “Get out production, cut the price”- Philosophy by Henry Ford is an example of...**

- a. Marketing Concept
- b. Selling Concept
- c. Production Concept
- d. Product Concept

**72. ....is the father of Modern Marketing.**

- a. Peter Drucker
- b. Philip Kotler
- c. Lester Wunderman
- d. Abraham Maslow

**73. The term marketing refers to:**

- a. Advertising, Sales Promotion, Publicity and Public Relational activities
- b. New product needs ideas, Developments, concepts and improvements.
- c. Sales Planning, Strategy and Implementation
- d. A philosophy that stresses customer value and satisfaction.

**74. .... defined as all psychological, social and physical behaviour of potential customers as they become aware of, evaluate, purchase, consume and tell others about the product and services**

- a. Customer Value
- b. Consumer Behavior
- c. Holistic Marketing
- d. Societal Marketing

**75. Marketing is a process which aims at -----.**

- a. Production
- b. Profit making.
- c. Satisfaction of customer needs
- d. Selling products

**76. Marketing management is \_\_\_\_\_.**

- a. developing marketing strategies to move the company forward
- b. managing the marketing process
- c. monitoring the profitability of the company's products and services
- d. the art and science of choosing target markets and getting, keeping, and growing customers through creating, delivering, and communicating superior customer value

**77. The most formal definition of marketing is -----.**

- a. An organizational function and a set of process for creating, communicating and delivering, value to customers and that benefit the organization.
- b. Improving the quality of life for consumers
- c. Meeting needs profitability
- d. Marketing is an organizational function includes the 4Ps

**78. Marketers often use the term \_\_\_\_\_ to cover various groupings of customers.**

- a. buying power
- b. demographic segment
- c. market
- d. people

**79. Today, marketing must be understood in a new sense that can be characterized as:**

- a. "Get there first with the most."
- b. "Management of youth demand."
- c. "Satisfying customer needs."
- d. "Telling and selling."

**80. Marketing is both an "art" and a "science" there is constant tension between the formulated side of marketing and the \_\_\_\_\_ side.**

- a. behavior

- b. creative
- c. management
- d. selling

**81. ....is the major objective of any marketing activity in the world because marketing completes with the real sale of goods and services bought or acquired by the seller or when intermediary has been affected.**

- a. Marketing
- b. Selling
- c. Assembling
- d. Transportation

**82. It up holds the importance of customer in the whole value creation process. The D.A.R.T highlights this aspect in a vivid manner.**

- A. Contemporary Model
- B. Conventional Model
- C. Both a&b
- D. None of the above

**83. Select an appropriate definition of Want**

- a. Consumer Needs
- b. Needs backed by buying power
- c. Needs directed to the product
- d. Basic human requirements

**84. The key customer markets consists of**

- a. Government Markets
- b. Business Markets
- c. Consumer Markets
- d. All of the above

**85. Definition of Marketing given by Philip Kotler:**

- a. Marketing is the process by which companies create value for customers & build strong customer relationships in order to capture value from customers in return.
- b. Marketing is a societal process by which individuals & groups obtain what they need & want through creating offering & freely exchanging products & services of value with others.
- c. Marketing is the activity, set of institutions & processes for creating, communicating, delivering & exchanging offerings that have value for customers, clients, partners & society at large.
- d. None of the above

**86. Which of the following statements is the most correct statement?**

- a. "The delivery of Goods & Services from producers to their ultimate consumers or users includes many different activities. These different activities are known as marketing."
- b. Marketing is to ensure that the product is easily & effectively moved from the point of production to the target market & ensures that the product can be easily accessed by customers."
- c. Marketing is the activity, set of institutions & processes for creating, communicating, delivering & exchanging offerings that have value for customers, clients, partners & society
- d. "Marketing is the last step in the chain of commerce where a buyer exchanges cash for a seller's good or service, or the activity of trying to bring this about."

**87. Anything that can be offered to a market for attention, acquisition, use, or consumption that might satisfy a want or need is called a(n):**

- a. Demand.
- b. Idea.
- c. Product.
- d. Service

**88. This company is well known for Technology innovation, Great value and act as a game changer.**

- a. Nokia
- b. Apple
- c. HTC
- d. Samsung

**89. ....buy products & .....use product.**

- a. Consumer & Customers
- b. Customers & Consumer
- c. Buyers & Sellers
- d. Buyers & Customers

**90. ....means the classification of standardized product into certain well-defined classes or groups."**

- a. Gradation
- b. Segmentation
- c. Standardization
- d. Specification



**91. Goods are purchased from various places and or sources and assembled at one or sources and assembled at one place to suit the requirement of the buyer is known as.....**

- a. Buying
- b. Selling
- c. Assembling
- d. Material Handling

**92. .... is the acquisition of goods and services by the seller or industrial user for the purpose of resale.**

- a. Selling
- b. Assembling
- c. Buying
- d. Transportation

**93. ....is establishment of certain standards or specifications for products.” It may involve Quality (color, taste, appearance, sweetness, purity) & Quantity (Weight, size, length etc.)**

- a. Standardization
- b. Gradation
- c. Product Control
- d. Product Development

**94. ....reflects the sum of the perceived tangible & intangible benefits & costs to customers.**

- a. Customer Satisfaction
- b. Customer Value
- c. Customer Delight
- d. None of the above

**95. In marketing, the term product:**

- a. refers only to tangible items that can be seen, tasted, or touched.
- b. is a broad concept that refers to anything that can be offered for use and consumption, in exchange for money or some other form of value
- c. is limited in meaning to goods, services, and ideas only.
- d. never refers to such things as package design, brand name, or warranty.

**96. An organization with several product lines has which one of the following mix that consists of all the product lines and items which a particular seller offers for sale?**

- a. Product mix
- b. Brand mix
- c. Consumer mix
- d. Packaging mix

**97. Testing before launching a product is known as -----.**

- a. Acid test
- b. Concept testing
- c. Market test
- d. Test marketing

**98. Launching a product in a small part of the market is called:**

- a. Commercialization
- b. Competitive analysis.
- c. Competitive response.
- d. Test marketing

**99. Original products, product improvements, product modifications, and new brands that a firm develops through its own research and development efforts are called:**

- a. Altered products.
- b. Concept products.
- c. New products.
- d. Supplemental products.

**100. Introducing the new product into the market takes place in which stage of the new product development process?**

- a. Commercialization
- b. Test marketing
- c. Product development
- d. Marketing strategy