**DEN 432 Week 2 Test Key**

**Question 1 of 40**

**The concepts of maximization, minimization, and optimization are one and the same:**

T **F**

**Question 2 of 40**

**Dr. Edward deBono invented the concept of Total Quality Management:**

T **F**

**Question 3 of 40**

**The design process is hard because:**

a) Design problems have multiple possible answers

b) As knowledge is gained, design freedom is lost

c) Decisions must be made on uncertain, incomplete, and conflicting information

d) None of these

**e) All of these**

**Question 4 of 40**

**The next step after the Product Definition Phase is:**

a) Team Contract

b) MRD

**c) PRD**

d) ERD

e) Product Requirements Definition Phase

f) None of these

g) All of these

**Question 5 of 40**

**The Six-sigma quality level should always be the key design objective:**

T **F**

**Question 6 of 40**

**The “Red Bead” experiment illustrates that (2 answers):**

* **a) Management does not understand the causes of variation**
* b) Management does understand the causes of variation
* **c) Management of American manufacturing companies blames workers for poor quality**
* c) None of these
* d) All of these

**Question 7 of 40**

**The Voice of a Customer is maintained in which of these documents?**

a) MRD

b) PRD

c) ERD

d) None of these

e**) All of these**

**Question 8 of 40**

**A Gantt chart is:**

**a) A deterministic project management tool**

b) A probabilistic project management tool

c) Same as PERT chart

d) None of these

e) All of these

**Question 9 of 40**

**The IDEO primary business is:**

**a) Industrial design**

b) Development of toys

c) Redesign of DNA

d) None of these

e) All of these

**Question 10 of 40**

**The desired outcome of the Product Requirements Definition Phase is:**

a) PRD

b) MRD

c) ERD

**d) None of these**

e) All of these

**Question 11 of 40**

**Who does ultimately decide what the appropriate level of product quality should be?**

a) Management

b) Design Engineers

**c) Customers**

d) None of these

e) All of these

**Question 12 of 40**

**A STANDARDIZED (Stage-Gate), systematic product development process works best, when applied in (two answers):**

**a) In designing products when time to market is of essence**

b) In designing products when managerial oversight is important

**c) in designing products under budgetary constraints**

d) None of these

e) All of these

**Question 13 of 40**

**The lowest “Bill of Material” should always be the key design objective:**

T  **F**

**Question 14 of 40**

**The fastest time to market should always be the key design objective:**

T  **F**

**Question 15 of 40**

**The project’s critical path is:**

**a) The sequence of activities that cannot slip**

b) The sequence of activities with some slack

c) The sequence of activities that are very difficult to complete

d) None of these

e) All of these

**Question 16 of 40**

**Which of those is a sequential process?**

a) Design for sustainability

**b) Additive manufacturing**

c) Design for the connected world

d) None of these

e) All of these

**Question 17 of 40**

**The “Red Bead” experiment illustrates the effects of not understanding the methods and principles of the Statistical Process Control:**

**T**  F

**Question 18 of 40**

**The desired outcome of the Concept Definition Phase is:**

**a) Concept drawing (Product Concept)**

b) MRD

c) ERD

d) None of these

e) All of these

**Question 19 of 40**

**The design process paradox states:**

**a) The more you learn, the less freedom you have to use what you know.**

b) The more you learn, the more freedom you have to use what you know

c) The less you learn, the less freedom you have to use what you know

d) the less you learn, the more freedom you have to use what you know

e) None of these

f) All of these

**Question 20 of 40**

**Ever new idea, invention, and process should always be patented:**

T **F**

**Question 21 of 40**

**A Bill of Material is:**

a) A permission to load explosive on a truck

**b) A list of all parts needed to make a product**

c) Another name for the cost of goods sold

d) None of these

e) All of these

**Question 22 of 40**

**The ERD is a document needed before the Preliminary Engineering Design Development Process can commence:**

**T**  F

**Question 23 of 40**

The process of reversed engineering is:

**a) Legal and useful**

b) Illegal but useful

c) Legal but also a waste of time

d) None of these

e) All of these

**Question 24 of 40**

**The functional silo (over the wall) based design process is the preferred product development approach:**

T **F**

**Question 25 of 40**

**The quality of a product should be:**

**a) Designed in**

b) Tested out

c) Ignored

d) None of these

e) All of these

**Question 26 of 40**

**The outcome of the product morphology process represents an input to the ERD:**

T **F**

**Question 27 of 40**

**The “Predecessor” is:**

**a) The activity to be completed before a subsequent activity can start.**

b) The activity to be completed after a subsequent activity has started.

c) The activity that cannot be on a critical path.

d) The activity that must be on the critical path.

e) None of these

f) All of these

**Question 28 of 40**

**A PERT chart is:**

**a) A probabilistic project management tool**

b) A deterministic project management tool

c) Another name for a critical path

d) None of these

e) All of these

**Question 29 of 40**

**The strategically most important development and design projects are best managed by this team structure:**

a) Light

b) Medium

c) Heavy

**d) Stealth**

e) None of these

f) All of these

**Question 30 of 40**

**Anyone can learn how to be creative:**

**T**  F

**Question 31 of 40**

**Best decisions are made by:**

**a) Cross-functional teams**

b) Individual team members

c) Senior manager

d) Independent consultants

e) Strong bosses

f) None of these

g) All of these

**Question 32 of 40**

**The Work Breakdown Structure is a properly sequenced set of all project’s activities:**

**T**  F

**Question 33 of 40**

**Invention and Innovation are one and the same:**

T **F**

**Question 34 of 40**

**Dr. W. Edwards Deming advocated:**

a) Cooperation over competition

b) Understanding the nature of process variations

c) The use of statistical methods as basis for the management of quality

d) None of these

**e) All of these**

**Question 35 of 40**

**Reaching the goal of “Zero defects” is:**

a) Always possible

b) Never possible

**c) Only possible by chance**

d) None of these

e) All of these

**Question 36 of 40**

**The key purpose of the Team Contract is to define team’s responsibilities:**

**T** …..F

**Question 37 of 40**

**A Project Variance is:**

**a) The sum of variances of all activities that are on the critical path**

b) The sum of variances of all project activities

c) The square root of the sum of standard deviations of each activity

d) None of these

e) All of these

**Question 38 of 40**

**Are decisions and choices made by designers are based on perfect information:**

a) Always

b) Seldom

**c) Never**

d) None of these

e) All of these

**Question 39 of 40**

**The Hannover Principles require that designers:**

A) Accept responsibility for the consequences of a product design

b) Understand the limitations of a design

c) Insist on the rights of humanity and nature to exist

d) None of these

e) All of these

**Question 40 of 40**

**The cost of making changes:**

**a) Increases over time**

b) Decreases over time

c) Stays the same overtime

d) None of these

e) All of these

**End of the Week 2 Test Key**