



- (b) Manager  
(c) Developer  
(d) None of the mentioned above
- 1-d. The greatest opportunity for product life cycle cost reductions are in the (CO2) 1  
(a) conception stage.  
(b) design stage.  
(c) development stage.  
(d) production stage.
- 1-e. Prototyping is an attractive idea for \_\_\_ and large systems. (CO3) 1  
(a) Complicated  
(b) Simple  
(c) Developed  
(d) All of the mentioned above
- 1-f. Product life cycle management is a management strategy for (CO3) 1  
(a) A small sample of the products.  
(b) A large sample of the products.  
(c) A prototype (the first) product made.  
(d) The entire model line.
- 1-g. Which process helps develop an accurate projection of a project's financial 1  
expenses and benefits? (CO4)  
(a) fast tracking  
(b) life cycle costing  
(c) critical path analysis  
(d) All the above
- 1-h. The total cost incur by customer to use, acquire, maintain and dispose service 1  
or product is classified as (CO4)  
(a) targeted life cycle  
(b) budgeted life cycle  
(c) customer life cycle  
(d) operating life cycle
- 1-i. Risk utility rises at a decreasing rate for a \_\_\_\_ person. (CO5) 1  
(a) risk-seeking  
(b) risk-averse

(c) risk-indifferent

(d) risk-neutral

- 1-j. Which process involves numerically estimating the effects of risks on project objectives? (CO5) 1
- (a) performing qualitative risk analysis
  - (b) planning risk management
  - (c) identifying risks
  - (d) performing quantitative risk analysis

**2. Attempt all parts:-**

- 2.a. What do you mean by 'Part' in PTC Windchill? (CO1) 2
- 2.b. what is Prototype? (CO2) 2
- 2.c. What are the 5 success factors for ERP Projects? (CO3) 2
- 2.d. What is the main goal of project cost management? (CO4) 2
- 2.e. Explain the objectives of risk management (CO5) 2

**SECTION B**

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**3. Answer any five of the following:-**

- 3-a. Where is PLM used and how does it work? (CO1) 6
- 3-b. Explain PLM Life cycle Model.(CO1) 6
- 3-c. How does product development achieve company growth? (CO2) 6
- 3-d. What questions do you need to ask yourself before developing a product? (CO2) 6
- 3.e. What are the 4 management strategies? (CO3) 6
- 3.f. What are the 4 main processes of cost management? (CO4) 6
- 3.g. Compare risk and uncertainty. Also explain the various types of risk (CO5) 6

**SECTION C**

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**4. Answer any one of the following:-**

- 4-a. Can you give me an example of a real-world organization where PLM has been useful (CO1) 10
- 4-b. Explain Design Development Stages. (CO1) 10

**5. Answer any one of the following:-**

- 5-a. Explain virtual testing and Prototype.(CO2) 10
- 5-b. Explain briefly collaborative Product Development.(CO2) 10

**6. Answer any one of the following:-**

- 6-a. What are the five phases of PLM? Explain in brief. (CO3) 10
- 6-b. What is Supply Chain Management? What are 4 pillars of supply chain? (CO3) 10

**7. Answer any one of the following:-**

- 7-a. What are the 7 principles of Quality Management System? (CO4) 10
- 7-b. What is Cost Budget and Variance Analysis? What are the 3 types of budgets? (CO4) 10

**8. Answer any one of the following:-**

- 8-a. What is Risk? and explain the risk management process.( CO5) 10
- 8-b. Explain the following concepts of probability and statistics for risk measurement: a) skewness, b) correlation, c) variance and standard deviation(CO5) 10

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